Is the Curriculum Working ?

The Key Stage 3 Phase of the Northern Ireland Curriculum Cohort Study

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CONTENTS

ACKNOWLEDGEMENTS

EXECUTIVE SUMMARY

This summary sets out in brief the findings to emerge from the Key Stage 3 phase of the NI Curriculum Cohort Study. Commissioned by the NI CCEA, the research was funded by DE (NI) and the Esmée Fairbairn Foundation. NFER conducted the study.

1. Aims and research methods

The overall aim of the research was to provide evidence of the impact of the whole curriculum as seen from the perspective of the learner. In particular, the project set out to investigate pupils' experiences of key curriculum design concepts such as breadth and balance, coherence, continuity and progression, relevance, manageability and enjoyment, as well as the cross-curricular themes.

To meet these aims, the study drew on a large set of quantitative and qualitative evidence collected through:

♦ annual surveys administered at the end of Years 8, 9 and 10 to a ten per cent representative sample of all NI pupils in the 1996 Year 8 cohort (2,694 pupils);

♦ annual school surveys to the 51 schools from which the pupil cohort was drawn, along with timetables for the years in question; and

♦ biannual visits to five case-study post-primary schools which each time involved: interviews with the same 12 pupils (who had initially been interviewed at primary school); a day's pupil pursuit observation and follow-up pupil interviews; interviews with teachers and senior managers; and indirect data collection activities.

In addition, the researchers collected the survey pupils' Key Stage 3 test scores in English, maths and science (according to which pupils were assigned to one of three attainment groupings).

2. Breadth and balance in the curriculum

A broad, balanced and common curricular entitlement was widely accepted to be one of the prime justifications for the introduction of national curricula. However, evidence on the time allocated by the 51 schools to different subject areas established that in reality, schools offered pupils a variety of NI curricula rather than a common NI curriculum. Analysis revealed six main types of curricula, which were closely allied to particular types of school and were principally characterised by the time allotted to two areas of the curriculum: languages (high time allocations in grammar schools and generally low allocations in secondary schools) and RE (high time allocations in Catholic-managed schools, low time allocations in Protestant-managed schools). When schools' timetables were compared with the minimum percentage time allocations suggested by NICC (1991), it emerged that very few schools were meeting the recommended times in all subjects, with music, art, PE and technology most likely to receive less than the recommendations.

The balance of the curriculum was out of alignment with pupils' views: from their perspective, too great an emphasis was placed on English, maths and languages and too little time devoted to practical subjects and CCTs. Low-engaged pupils expressed concerns about the over-representation of academic subjects, and there was evidence that this perceived lack of balance in the curriculum was contributing to their sense of disengagement. Grammar school pupils particularly found the curricula they experienced to be unbalanced.

3. Coherence across the curriculum

Views and experiences of across-subject coherence were sought. Teachers interviewed reported that they let cross-curricular links occur through serendipity rather than deliberately building them in. However, evidence from the pupil pursuits suggested that such a strategy could fail to maximise the potential for learning. The observations showed how pupils' days were strongly compartmentalised into a series of subject-based experiences with minimal references made to learning in other areas. Thus, many valuable learning opportunities for exploring links across the curriculum were lost to both pupils and teachers. This would seem to be an important issue to consider, given the evidence that when links across subjects did occur and were perceived by pupils, they found these beneficial to their learning.

4. Continuity and progression, progress and assessment

The study also examined coherence over time, namely continuity and progression within subjects. Lesson-to-lesson, pupils generally felt that their subjects followed on, though least 'follow-on' was observed in several practical subjects, especially PE and music. A close association emerged between pupils' level of academic attainment and their capacity to discern continuity both in terms of how much follow-on was recognised and how it was perceived. Only high attainers perceived continuity in a way that matched their teachers' descriptions of how follow-on was built into schemes of work, and recognised the progressive accumulation of new knowledge and skills. The pupil pursuit observations established that continuity and progression tended to be implicit in lessons rather than explicitly explained to pupils. However, there were signals that emphasising continuity in teaching approaches could have major benefits for enhancing learning: the high attainers, best able to recognise follow-on, expressed how this aided their understanding of the subject matter under study.

The research sought the impact of the Key Stage 3 tests on pupils' experiences of the curriculum in Year 10. Pupils, by their own admission, were motivated by the tests, and there was evidence that they were an important factor in ameliorating in Year 10 the disengagement from the curriculum which had beset many pupils in Year 9. However, the tests were also found to disturb the progression, balance, manageability and relevance of the curriculum. It was suggested that this raises some fundamental questions for curriculum designers: for example, can a curriculum be mounted where the subject matter and skills intrinsically motivate pupils rather than the extrinsic drive towards assessment?

5. Relevance and appropriateness

Pupils' opinions were garnered on the relevance of the curriculum to their current needs, to life in the future and to careers. It emerged that pupils were well attuned to the value of the key skills – literacy, numeracy and ICT – as well as careers education. Expressive arts, RE and languages were consistently considered least useful. The findings revealed that in general, over the Key Stage, pupils, particularly grammar school pupils, became increasingly utilitarian in their perceptions of relevance and assessed the value of subjects in terms of their worth for a job or career. There was also evidence that implicit messages (e.g. the amount of time allocated to a subject or its status in the assessment system) appeared to be more influential than explicit messages (e.g. teachers explaining why learning certain skills is important) in shaping pupils' perceptions of relevance and crucially, therefore, their motivation in the subject. One key implication highlighted was that if we want pupils to learn effectively across all areas of the curriculum, then assessment and time allocation systems must transmit a message of greater parity of status across the curriculum as a whole.

6. Manageability

Both in terms of the amount and level of the work required by the Key Stage 3 curriculum, the evidence indicated an appreciable decrease in manageability at Year 9 compared with Year 8, with Year 10 being broadly similar to Year 9. Generally, pupils felt 'under-worked' in the arts and practical subjects, and also regarded these as the easiest subjects. Pupils tended to feel over worked in maths and modern languages; the latter were also deemed to be the most difficult area of the curriculum, with the perceived level of difficulty increasing throughout the Key Stage, especially in grammar schools. Indeed, grammar school pupils tended to rate their subjects as more difficult than their secondary peers. Notwithstanding this, there was evidence that, at times, pupils of all attainment levels were not challenged enough. Boredom and frustration were often the by-products of lessons where pupils found the work easy or were given too little to do.

7. Enjoyment

Although it was found that pupils generally enjoyed their subjects, there was a decline in their level of enjoyment in virtually all subjects over the three years. The main findings to emerge from the analysis were the lesser enjoyment of subjects by high-attaining pupils, and the marked decline of low attainers' enjoyment over the Key Stage. Overall, it was suggested that the results posed an important challenge to curriculum designers and teachers: is it possible to design and mediate a curriculum that increases rather than decreases pupils' levels of enjoyment over the three years of Key Stage 3?

8. Cross-curricular themes

Considerable variation was apparent in the amount and type of different schools' provision of the CCTs, and there was telling evidence to indicate that there was plenty of scope for enhancing the mediation, standing and the level of challenge required of CCTs in many schools. Indeed, from the pupil perspective, it was clear that the importance that they particularly attached to IT, health education and careers was not reflected in the quantity and quality of provision they received in these areas.

9. Summary and conclusion

The report concludes by positing the question 'Is the curriculum working?', and in response, sums up the key positive messages to emerge from the research and then the problems with the NIC which were identified.

1. THE NORTHERN IRELAND CURRICULUM COHORT STUDY

1.1 Introduction and background

In 1993, officers of the then Northern Ireland Curriculum Council (NICC) approached the National Foundation for Educational Research (NFER) in order to discuss the feasibility of evaluating the Northern Ireland Curriculum (NIC) through an analysis of the learner's experience of the whole curriculum. As part of its commitment to keep the curriculum under regular review, NICC had already completed its own monitoring programme of the initial implementation of the NIC in the early 1990s. This had afforded insights into the appropriateness of the Programmes of Study and Attainment Targets for individual subjects, but NICC considered that future reviews would need to draw on empirically based research into an overview of the curriculum and its appropriateness by Key Stage, as experienced by pupils. Essentially, NICC sought to explore the prospect of initiating research that could examine the impact of the NIC as a total package on the experience of the learner. Key Stage 3 was seen as a particularly appropriate phase for this line of enquiry.

After the opening discussions, NFER produced a methodological paper which considered possible options, research methods and procedures for conducting a longitudinal cohort study of pupils through Key Stage 3. In the wake of this paper, a 16-month pilot study, involving five post-primary schools, explored the viability of the proposed research and trialled various methods in order to develop suitable instruments for the main study. Building on the recommendations of the ensuing report into the pilot phase (Harland *et al.*, 1996), the full Northern Ireland (NI) Curriculum Cohort Study was launched in 1996. Whereas two interim reports (Harland *et al.*, 1999a and 1999b) have outlined some early findings relating to the final year of primary schooling and the first year of post-primary, this report sets out the analysis of the full range of data collected on pupils' curricular experiences from Year 7 through to the end of Key Stage 3 in Year 10.

The cohort study was conducted by NFER and funded by the Department of Education (NI), the Esmée Fairbairn Foundation and the Northern Ireland Council for the Curriculum, Examinations and Assessment (CCEA).

In many respects, the study represents an important and innovative development in the methods used to evaluate the implementation and effectiveness of curricula. A recent review of research into pupils' experiences of the curriculum (Lord and Harland, 2000) confirms that no comparable evaluations of National Curricula have been conducted elsewhere in the UK. The NIC Cohort Study is particularly distinctive in the manner in which it applies a longitudinal methodology to a focus on the whole curriculum, which is investigated through pupils' perceptions of the core curriculum design principles (e.g. breadth and balance, coherence, appropriateness and relevance) that underpinned, ostensibly at least, the formation of the different National Curricula in the late 1980s. Thus, the techniques used in the study, along with the findings reported here, have significance beyond the

immediate confines and concerns of NI. By directing attention towards pupils' experiences and views of the curriculum, in addition to those of teachers, the project was launched into relatively uncharted waters, offering the potential for new empirical evidence of practical benefit to policy makers, schools and teachers, as well as methodological developments of interest to the educational research community.

1.2 Aims

The overall aim of the research was to provide evidence of the impact of the whole curriculum as seen from the perspective of the learner. Its purpose was to produce data that would be representative of the Key Stage 3 population of NI.

In accordance with the overall aim, the research investigated the impact of the curriculum in terms of the key curriculum design concepts:

♦ relevance and appropriateness;

♦ breadth and balance;

♦ coherence within and across subjects;

♦ enjoyment; and

♦ manageability.

Additionally, the study explored:

♦ the appropriateness of methods of assessment and evaluation;

♦ the coverage of the cross-curricular themes (CCTs); and

♦ the extent to which the aims of the NIC were evident in its implementation.

1.3 Methodology

As a longitudinal study, the research tracked the experiences of the same pupils throughout Key Stage 3. The research employed both quantitative and qualitative methods and consisted of three main strands:

♦ an annual pupil questionnaire;

♦ an annual school questionnaire; and

♦ case studies of five selected post-primary schools.

An overview of the data collection methods and fieldwork is presented in Table 1.1, and a detailed account of each of the above strands is given below.

1.3.1 The annual pupil questionnaire

A questionnaire was administered by researchers to the pupil cohort sample at the end of each of the three academic years in Key Stage 3. The target sample for this questionnaire was pupils who started Year 8 in September 1996 and completed Year 10 in 1999. The sample size was ten per cent of all NI pupils in this 1996 Year 8 cohort (2,694 pupils), drawn from approximately 20 per cent of all NI post-primary schools (51 schools) – i.e. half the Year 8 cohort in these schools.

Table 1.1   Overview of the data collection methods and fieldwork

School year	Date	Duration (days per school)	Data collection
Year 7	June 1996	3.5	Visits to the 10 primary schools (two feeders for each of the five case-study post-primary schools): • interviews with the six case-study pupils in each; • day-long pupil pursuit and follow-up interviews; and • interviews with Principal and Year 7 teacher(s).
	December 1996	3.5	First visit to each of the five case-study post-primary schools: • interviews with the 12 case-study pupils in each; • day-long pupil pursuit of 1–4 pupils and follow-up interviews; • interview with Principal, member of senior management, up to three teachers; and • concept mapping activities with pupils.
Year 8	March 1997	3.5	Second visit to each of the five case-study post-primary schools: • interviews with the 12 case-study pupils in each; • day-long pupil pursuit of 1–4 pupils and follow-up interviews; and • interviews with three more teachers.
	June 1997	0.5	Year 8 Annual Survey • administration of the annual pupil questionnaire to approx. 2,600 pupils in the 51 survey-sample schools; and • delivery of the school management questionnaire.
Year 9	January 1998	3.5	Third visit to each of the five case-study post-primary schools: (itinerary as March 1997).
	March 1998	3.5	Fourth visit to each of the five case-study post-primary schools: (itinerary as March 1997).
	June 1998	0.5	Year 9 Annual Survey • administration of the annual pupil questionnaire and delivery of the school management questionnaire (details as June 1997).
Year 10	December 1998	3.5	Fifth visit to each of the five case-study post-primary schools: • interviews with the 12 case-study pupils in each; • day-long pupil pursuit of 1–4 pupils and follow-up interviews; • interviews with three more teachers; and • concept mapping activities with pupils.
	May 1999	3.5	Sixth visit to each of the five case-study post-primary schools: • interviews with the 12 case-study pupils in each; • day-long pupil pursuit of 1–4 pupils and follow-up interviews; and • interviews with careers coordinator, Vice Principal with responsibility for Key Stage 3 tests and options procedure, pastoral staff member.
	June 1999	0.5	Year 10 Annual Survey • administration of the annual pupil questionnaire and delivery of the school management questionnaire (details as June 1997).

Below, we explain the rationale for the selection of schools and pupils involved in the survey, as well as describing the design and administration of the questionnaires used in the survey.

Selecting the schools

In order to produce survey samples that would be both statistically robust and representative of the NI Year 8 school population as a whole, the group of pupils was drawn from a stratified random sample of schools. The sampling frame was designed to provide a proportionate representation of all types of post-primary school in NI (e.g. grammar and secondary; controlled, maintained, voluntary and integrated; size; coeducational and single-sex; Education and Library Board (ELB) location). To allow disaggregation by the wide diversity of schools found in NI, it was decided that the school sample should consist of 20 per cent of the 236 post-primary schools (in existence when the sample was drawn in February 1997), together with the five case study schools. This gave a total sample of 51 schools.[1] The sampling frame was based on information about the number and identities of schools provided in DENI (1996). Care was taken to ensure that, within individual ELBs, the sample included a broadly proportionate distribution of schools according to size, GCSE performance and type of school.

Table 1.2 gives the numbers in the sample for each type of school, together with the numbers across NI as a whole (as it was in 1996).

Table 1.2   Characteristics of the schools in the sample and in NI as a whole

	Sample		Northern Ireland	
Characteristics	%	N	%	N
Status				
Controlled	41	21	41	96
Voluntary	22	11	22	53
Maintained	33	17	33	78
Integrated	4	2	4	9
Totals	*100*	*51*	*100*	*236*
Type				
Secondary	71	36	70	165
Grammar	29	15	30	71
Totals	*100*	*51*	*100*	*236*
ELB location				
Belfast	16	8	16	38
Western	21	11	22	51
North Eastern	22	11	22	53
South Eastern	18	9	17	40
Southern	23	12	23	54
Totals	*100*	*51*	*100*	*236*

Source: *NIC Cohort Study: Year 8 School Survey and DENI (1996)*

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[1] Fifty-one schools constituted the survey sample in Year 8. Fifty of these schools then participated in the Year 9 survey; one school (a small secondary which contributed 19 pupils to the pupil cohort) was unable to take part because it was in the process of amalgamating at the time of the survey; the school did return to the sample in Year 10. In Year 10, two of the survey sample schools (a single-sex girls' and a single-sex boys' Catholic-managed school) merged together so officially the survey sample size was 50 schools that year; however, because this was initially an administrative merger (i.e. girls and boys followed different timetables, and were educated on two separate campuses), in the analysis the merged schools continued to be considered individually.

As Table 1.2 clearly demonstrates, the school sample closely matched the distribution of key characteristics displayed by the population of NI post-primary schools.

Selecting the pupils

The target sample for the annual pupil questionnaire was ten per cent of all NI pupils in the 1996 Year 8 cohort. The size of this sample was deemed large enough to ensure that the results would be generalisable to the full cohort. Given that DENI statistics predicted that the 1996–7 Year 8 cohort would comprise 26,227 pupils, the anticipated sample size was set at 2,623.

To achieve this, one in two pupils in the 1996 Year 8 cohort in each of the 51 survey schools was included in the pupil questionnaire sample. NFER researchers drew the school sub-samples through a process of random selection (by choosing every other pupil on form class lists provided by the schools). This achieved a sample of 2,694 pupils who completed the Year 8 pupil questionnaire. As a longitudinal study, these pupils then formed the sample for the Year 9 and 10 surveys, though absences on the day of the questionnaire administration, or a pupil having moved schools, meant that the sample was slightly smaller in Year 9 (2,605 pupils) and Year 10 (2,595 pupils), despite every effort having been made to find a classmate to replace any missing members of the original sample.

Pupil characteristics

Although replacing absent pupils in Years 9 and 10 did mean that there were very small changes in the make-up of the pupil sample in these years, the figures presented below, based on the cohort as it was in Year 8, are characteristic of the sample over the three years. The pupil sample comprised:

- 1,749 pupils in secondary schools and 945 pupils in grammar schools;

- slightly more children in Catholic-managed schools (1,331) than in Protestant-managed schools (1,214), and 149 in integrated schools; and

- 1,298 boys and 1,396 girls.

Further details of the characteristics of the pupil sample are given below in terms of its distribution by gender of school, size of school, social class, free school meal eligibility, level of attainment and degree of engagement.

Gender and size of schools

The distributions of pupils and schools according to the gender and size of individual schools are presented in Tables 1.3 and 1.4.

Table 1.3   Distribution of schools and pupils according to the gender of individual schools

	Schools		Pupils	
Gender of school	%	N	%	N
Single-sex (boys)	16	8	15	418
Single-sex (girls)	17	9	24	637
Mixed	67	34	61	1,639
Totals	*100*	*51*	*100*	*2,694*

Source: *NIC Cohort Study: Year 8 Pupil Survey*

Table 1.4   Distribution of schools and pupils according to the size of individual schools

Size of school	Schools		Pupils	
	%	N	%	N
Small (below 500)	37	19	22	580
Medium (501–800)	39	20	41	1,115
Large (above 800)	24	12	37	999
Totals	*100*	*51*	*100*	*2,694*

Source: *NIC Cohort Study: Year 8 Pupil Survey*

As can be seen from Table 1.3, two-thirds of the schools in the sample were mixed schools, with the remainder divided almost equally between single-sex schools for each gender. Three-fifths of the pupils in the sample attended mixed schools, and fewer boys than girls attended the single-sex schools. Table 1.4 shows that two-fifths of the sample attended schools of medium size; over a third attended large institutions; and less than a quarter attended small schools.

Social class and free school meal eligibility

On the basis of their fathers' occupations, 1,062 children were categorised as working class and 866 children were categorised as middle class. It was not possible to determine the social class of 766 pupils (28 per cent). In order to establish the distribution of pupils in the sample by social class, the relevant biographical data from the pupil questionnaires were cross-tabulated with the other key variables (see Tables 1.5–1.6).

Table 1.5   Distribution of pupils by social class and type of school

School Type	Social Class			
	Working		Middle	
	%	N	%	N
Grammar	28	293	55	478
Secondary	72	769	45	388
Totals	*100*	*1062*	*100*	*866*

Source: *NIC Cohort Study: Year 8 Pupil Survey*

Table 1.6   Distribution of pupils by social class and level of eligibility for free school meals (fsm) in the school

Level of eligibility for fsm in the school	Social Class			
	Working		Middle	
	%	N	%	N
Low (0–14%)	35	320	63	469
Medium (15–39%)	33	302	25	191
High (above 40%)	33	304	12	91
Totals	*100*	*926*	*100*	*751*

Source: *NIC Cohort Study: Year 8 Pupil Survey*

From Tables 1.5 and 1.6, it can be seen that over a quarter of working-class pupils were in grammar schools, while almost three-quarters were in secondary schools. Only 12 per cent of middle-class pupils attended schools with a high degree of

eligibility for free school meals, compared with a third of the working-class pupils in the sample.

Levels of attainment and engagement

The sample pupils' Key Stage 3 test results for English, maths and science were collected by the research team with their schools' permission (only one of the 50 schools refused consent). This allowed the breakdown of the sample by level of attainment. Pupils were assigned to one of three attainment groups, low, mid or high, on the basis of their results (their overall levels for each of the three subjects were totalled and the average computed). Table 1.7 below shows the distribution of the sample across the attainment groupings.

Table 1.7   Distribution of pupils by level of attainment in Key Stage 3 tests

Level of attainment	Pupils	
	%	N
Low (up to level 5)	29	775
Mid (level 5–low 6)	28	752
High (above upper 6)	35	953
Unknown	8	214
Totals	*100*	*2,694*

Source: *NIC Cohort Study*

As shown in Table 1.7, although there was a slightly greater proportion of high attainers, the sample, broadly speaking, was evenly split between the three attainment groupings.

The Years 9 and 10 pupil surveys included items designed to gauge pupils' level of commitment to school ('*I look forward to coming to school*', '*I find most of my subjects interesting*', '*I find it hard to concentrate in some subjects*'). Based on pupils' responses to these questions, their degree of engagement with learning at school was determined. Table 1.8 shows the distribution for each year of Key Stage 3. There was some change in the distribution each year because pupils' responses to the items from which level of engagement was derived differed each year. There were a large number of unknowns in Year 8 because the 'engagement' items were not included in the Year 8 pupil questionnaire so pupils' Year 9 responses were used. Accordingly, it should be borne in mind throughout the report, that when Year 8 pupils' responses are analysed by levels of engagement, they are based on Year 9 responses to the engagement items.

Table 1.8   Distribution of pupils by level of engagement in each year of Key Stage 3

Level of engagement	Year 8		Year 9		Year 10	
	%	N	%	N	%	N
Low	23	610	27	708	30	776
Mid	33	898	41	1,070	38	986
High	26	702	32	825	32	831
Unknown	18	484	0.1	2	0.1	2
Totals	*100*	*2,694*	*100*	*2,605*	*100*	*2,595*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

Questionnaire design and administration

It was agreed that the 12-page-long pupil questionnaire should be an appropriately amended and extended version of that used in the pilot phase (see Harland *et al.*, 1996). A copy of the questionnaire is reproduced as Appendix 1. The backbone of the instrument consisted of a semantic differential grid, which invited ratings on the key curriculum design concepts (e.g. appropriateness and relevance, manageability, continuity, breadth and balance, etc.) for all main subjects of the NIC. Wherever appropriate, the cross-curricular themes were also included: Information Technology and Health Education in each year's questionnaire, and, reflecting its greater presence in the curriculum that year, Careers Education in Year 10. The questionnaire also contained items on: biographical information; the constructs pupils use to describe their learning (e.g. 'subject' or more general vocabularies of experience); their perceptions of topics they considered insufficiently covered in the curriculum; their awareness of curricular links between different subject areas; their opinion of curriculum continuity between their current and previous year's schooling; their views on the value of different assessment methods; and, in Year 8, items on the values and the moral dimension in education.

Most of the questionnaire items were repeated at each administration in order to monitor changes in pupils' perceptions and experiences over the Key Stage. However, in Year 9, case-study work suggested that pupils were becoming disenchanted with the curriculum, and consequently two extra questions were added to gauge their level of commitment or disengagement from schooling. In the Year 10 questionnaire, since pupils had come to the end of Key Stage 3, an extra question was included on the skills they had acquired or improved upon since Year 8. Also, in Year 10, the assessment question of the Years 8 and 9 questionnaires (on the value of different means of assessment) was replaced with an item that probed their experience of the Key Stage 3 tests.

In each school, the questionnaire administration was carried out by members of the research team. This reduced the risk of any teacher influence on the respondents, minimised the demands on schools, and allowed for oral explanations to accompany written instructions.

1.3.2 The annual school questionnaire

All schools whose pupils were involved in the annual pupil questionnaire were asked to complete a yearly school questionnaire, to be filled in by a member of the senior management. Each year, this four-page-long questionnaire enquired directly about the organisation of the curriculum for the cohort pupils' current year group; a copy of the timetable for their year group was requested; details of the teaching of the cross-curricular themes that year sought; and information regarding policies gleaned (e.g. assessment, cross-curricular skills, Special Education Needs (SEN) provision, allocation of pupils to registration forms and teaching classes, and only in Year 8, the ethos fostered by the school and provision for pupils' personal, social and moral development). Key background details on the school were also collected (not Year 9) (e.g. number of pupils on roll, number of staff, number of pupils eligible for free school meals and number of pupils from ethnic minority groups). All the information requested set the essential context for the analysis of the data collected in the pupil questionnaire.

The return rate of the school management questionnaire for each year of inquiry was as follows:

Year 8: Of the 51 schools, 48 returned all requested data (i.e. questionnaire and Year 8 timetable); one school sent their Year 8 timetable only; no response from two schools.

Year 9: Of the 50 schools, 44 returned all requested data (i.e. questionnaire and Year 9 timetable); two schools sent their questionnaires only; one school sent their Year 9 timetable only; no response from three schools.

Year 10: Of the 51 schools, 45 returned all requested data (i.e. questionnaire and Year 10 timetable); four schools sent their Year 10 timetable only; no response from two schools.

1.3.3 Case studies

The case-study component played a pivotal role in providing more detailed evidence of pupils' perceptions and experiences than could be gained from the surveys alone. Case-study research consisted of a preliminary phase carried out in primary schools and the main post-primary phase which continued throughout Key Stage 3. As far as possible, the same pupils were interviewed and observed throughout the project. Consequently, valuable opportunities were created for comparing each individual's perceptions and experiences from Key Stage 2, over the transfer period into Year 8, and throughout the whole of Key Stage 3.

The case-study schools

It is important to note that it was never intended that the five schools involved as case-studies should be representative of all types of post-primary school in NI. Quite apart from the obvious fact that only five schools would always be unrepresentative, the primary considerations when selecting the case studies for this longitudinal study were the need to include examples of the main types of school and to engage schools which were willing to sustain involvement over the three years of the project. In the following account of the five case-studies, highly specific school details, for example, the exact number of pupils on roll, have purposefully been omitted as such descriptions of a school's key features could compromise the anonymity of some of the participating institutions.

Of the five case studies, two were grammar schools, (one Catholic-managed and one Protestant-managed), two were secondary schools (one Catholic-managed and one Protestant-managed) and the fifth was an integrated, all-ability school (though to protect its anonymity, this school is referred to as a secondary in the report). All five schools were co-educational. The five case studies were located in different parts of NI and across three of the five ELBs. The sample included schools with urban, rural and mixed catchment areas and incorporated children of all socio-economic status. The size of the pupil rolls in each school varied between approximately 500 and 1,200.

The main case-study phase of the research was preceded by a preliminary round of fieldwork with pupils while they were in Year 7. The Pilot Study (Harland *et al.*, 1996) suggested that pupils' constructs of the curriculum at Key Stage 3 were influenced by their primary-school experiences; therefore garnering case-study pupils' perceptions before transfer would provide an important baseline for the research. Ten primary schools, which fed the five post-primary schools identified for the main Key Stage 3 case-study phase, were selected through consultation with CCEA officers. Thus, the sample comprised two primary schools for each post-primary school. One fieldwork visit lasting three-and-a half days took place in the primary schools in June 1996.

Timing of case-study visits

For the main phase of the research, two sets of case-study fieldwork were conducted in the five post-primary schools in each year of Key Stage 3 (1996–1999). These visits were initially intended to take place at the end of the autumn and spring terms. In the event, however, this was only possible in Year 8. In Year 9, owing to difficulties with the funding of the project, the autumn case-study visit was carried out in January 1998 rather than December 1997 (one school was consequently unable to accommodate the fieldwork for this particular visit). With regard to Year 10, in order to garner pupils' experiences of the Key Stage 3 tests and their feelings regarding their subject choice for Key Stage 4, the spring term case-study fieldwork visit was delayed until May.

In each of the five post-primary schools, the fieldwork was undertaken by a single researcher, and, as far as possible, the same researcher returned to the same school to ensure continuity of contact.

Case-study data collection methods

Each case-study visit to the primary and post-primary schools lasted three-and-a-half days, and the following data collection methods were deployed:

- interviews with pupils;
- pupil pursuit observations and follow-up interviews;
- interviews with teachers and senior managers; and
- indirect activities with pupils (concept mapping).

Details of each of the above research methods are presented below.

Interviews with pupils

The intended sample size for the case-study interviews was 60 pupils (12 per post-primary school), who would be selected and interviewed once in Year 7 and then biannually as they progressed through each year of Key Stage 3. In actuality, 62 pupils, evenly split between boys and girls, formed the case-study cohort.

The vast majority of pupils were selected whilst still in their primary schools. In each of the ten primary schools, six Year 7 pupils (five pupils in two schools)[2] transferring to the participating post-primary schools were chosen by the research team, following discussions with the principals concerned. Parental consent to interview these pupils was obtained in all cases. There were two primary schools for each post-primary school; therefore, when these pupils transferred, the sample for each post-primary school was 12 pupils. Overall, the case-study pupil sample incorporated a cross-section of all abilities; and within a particular school's sample, care was taken to select pupils of all levels of attainment (even in grammar schools, though this was relative to the school).

During each case-study fieldwork visit, all case-study pupils were interviewed once. The interview addressed the key areas of investigation in accordance with the aims of the research as stated earlier. To allow comparisons to be made over the course of the study, the schedule was largely identical each year. Only minor amendments were made. The questions on values in the Year 8 schedule were omitted from those for Years 9 and 10. In line with the additions made to the annual pupil questionnaire, in Year 9 the schedule included extra questions on enjoyment and engagement, and in Year 10 questions were added on the impact

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[2]　In addition to this group of 58 pupils, a further four joined the cohort during Key Stage 3 as replacements for pupils in the original sample who, for various reasons (e.g. long-term sick, leaving the school), were unable to continue. This brought the total number of interviewees in the cohort to 62.

of the Key Stage 3 tests, the options procedure and personal progress over the Key Stage. In Key Stage 3, because fieldwork visits were biannual, the schedules sought pupils' views on their current term's studies; in Year 7, there was only one set of fieldwork so pupils were asked about the whole year's work. Table 1.9 shows the number of interviews conducted with the case-study pupils in each year of the study.

Table 1.9   Number of interviews conducted with case-study pupils from Year 7 to Year 10

Year	Number of pupil interviews
Year 7	58
Year 8	119
Year 9	104
Year 10	113
N =	394

Source: *NIC Cohort Study: case-study interviews*

Table 1.9 shows that the number of interviews conducted in Year 9 was considerably lower than the target of 120 interviews. This is because one of the case-study secondary schools was unable to accommodate the first fieldwork visit in Year 9 when the timing of the visit had to be moved from December to January. Of the 62 case-study pupil interviewees, 37 were interviewed at all seven rounds of fieldwork.

Pursuit observations and follow-up interviews
During each fieldwork visit to the case-study schools, one day was spent tracking case-study pupils through a full day of lessons. In Year 7, this involved all case-study pupils who tended to be from the same class. During Key Stage 3, a sub-sample of between two and four case-study pupils who followed the same timetable were observed. In order to observe as many of the case-study pupils as possible, the 'pursued' sub-sample was changed each year.

As part of the pursuit, researchers completed a lesson sheet for each observed session which garnered basic information from the teacher on the aims and focus of the lesson, numbers in the class and timing. Detailed observation notes were made on the teacher's inputs and actions as well as the responses and actions of the selected pupils. On the following day, the case-study pupils involved were interviewed for their perspective on the observed lessons (as well as more generally on the cross-curricular themes).

Table 1.10 shows the number of full-day pupil pursuits and follow-up interviews conducted over the course of the study.

Table 1.10   Number of full-day pupil pursuits and follow-up interviews conducted from Year 7 to Year 10

Year	Number of pupil pursuits	Number of follow-up interviews
Year 7	9	58
Year 8	10	31
Year 9	9	25
Year 10	9	22
N =	37	136

Source: *NIC Cohort Study: case studies*

Interviews with teachers and senior managers

The programme of fieldwork undertaken during each visit to the case-study schools included individual interviews with members of staff in order to garner their perspective on the NIC and its planning and mediation in their schools. In total, 114 interviews were conducted with 106 staff members (six members of staff were interviewed twice, and one teacher was interviewed three times). Of these 106 staff members interviewed, there were:

- 12 Year 7 teachers from the case-study primary schools;

- seven principals from the case-study primary schools;

- 74 subject teachers from case-study post-primary schools; and

- 13 staff members in management/responsibility positions in the case-study post-primary schools (though four of these managers also gave their perspective on the subject they taught).

An account of the staff interviews is given below.

Interviews with teachers and principals in the case-study primary schools

As part of the fieldwork visit to the primary schools, the class teachers of the case-study pupils were interviewed for their views of the Year 7 curriculum. Twelve Year 7 teachers from nine of the ten primaries were interviewed in total. Principals from seven of the primaries were interviewed in order to gather background information on the school and details regarding pupils' transfer to post-primary education. No staff interviews were conducted in one case-study primary school.

Interviews with subject teachers

The post-primary subject teachers who were interviewed were selected by their school, though the research team specified subjects to ensure that in each case-study school, at least one teacher of every subject of the NIC was interviewed (however, certain subjects – German, Spanish and Irish, and also drama – were not taught in all of the case-study schools, and therefore the number of interviewees for these subjects is lower). Interviews were also conducted with coordinators of the cross-curricular themes, including IT in three schools. In addition, in order to reflect schools' coverage of careers education and to ascertain the guidance received by pupils prior to their selection of subjects for Key Stage 4, the careers coordinator in each of the five schools was interviewed.

It was requested that the subject teachers to be interviewed should teach at least one of the case-study pupils. In order to relate their perspective with that of their pupils, the subject teachers were asked about the curriculum that they had taught to the case-study pupil's class during the term in which their interview took place. Consequently, the subject teachers' discussions related specifically to the NIC for their subject for Year 8 or Year 9 or Year 10 (though inevitably the discussion widened occasionally to encompass the whole of Key Stage 3). Table 1.11 shows the number of post-primary subject teachers interviewed in each year of Key Stage 3.

Table 1.11   Numbers of post-primary subject teachers interviewed in each year of Key Stage 3

Subject	Number of teachers: Year 8	Number of teachers: Year 9	Number of teachers: Year 10	Total number of teachers:
Art	–	4	1	5
Careers education	–	–	5	5
Drama	–	1	1	2
English	4	1	2	7
French	5	1	1	7
Geography	4	1	–	5
German	1	1	–	2
History	3	2	–	5
Home economics	2	1	2	2
Irish	–	2	–	2
IT	1	1	1	3
Maths	4	1	1	6
Music	3	1	2	6
PE	1	3	1	5
RE	1	3	1	5
Science	4	1	1	6
Spanish	–	1	–	1
Technology	1	3	1	5
N =	33*	27*	19*	78*†

Source: *NIC Cohort Study: case-study interviews*

*NB: These figures are not the sum total of their columns but the actual number of subject teachers interviewed each year and overall. There are discrepancies because four individuals appear twice in the table: three teachers (one in each of Years 8, 9 and 10) spoke about the two subjects they taught in the course of one interview; and one teacher was interviewed twice: once as subject teacher in Year 8 and once as careers coordinator in Year 10.

† The overall total in this table (78) includes the four senior managers who also gave their perspective on the subject they taught, either in a separate interview or during their interview as a senior manager.

Interviews with staff in management or responsibility positions

In the first and final visits to the case-study post-primary schools, interviews were conducted with staff in management or responsibility positions in order to ascertain wider information about each school. During the first case-study fieldwork visit in December 1996 when the cohort pupils were in Year 8, interviews were conducted with senior staff in order to clarify details of each school's policies and procedures:

- Individual interviews were conducted with each Principal to ascertain background details on each school (e.g. number of pupils on roll, characteristics of intake) and the nature of curriculum and whole-school policies.

- Staff in management or responsibility positions (e.g. Vice Principal, Head of Key Stage 3, Head of Year 8) were interviewed in order to gain further insight into the organisation of the curriculum and also to glean information on the pastoral system in the school.

During the final case-study fieldwork visit in May 1999 when the cohort pupils were in Year 10, interviews with staff were devised to reflect the predominant concerns of pupils in Year 10:

- Individual interviews were carried out with the careers coordinator in each school.

- Individual interviews were conducted in each school with member(s) of staff with responsibility for the Key Stage 3 tests and the Key Stage 4 options structure.

- A pastoral manager (e.g. Head of Year, Head of Key Stage) with knowledge of the 12 pupil interviewees from each school was interviewed in order to gather academic, behavioural, emotional and motivational details on each pupil.

Concept mapping
In the first case-study visits of Year 8 and Year 10, a sub-sample of the interviewed pupils were asked to participate in an 'indirect' data collection technique, concept mapping, whereby they were asked to draw a diagram of the curriculum as they saw it under the heading, '*All I can learn at school in Year 8/10*'. In total, 21 pupils from three schools took part in this in Year 8; and 18 pupils from three schools were involved in Year 10.

1.4 Analysis procedures

In order to prepare the evidence of the pupil and school questionnaires for analysis, coding frames were developed for the open-ended items, and the responses were coded by the same researcher each year. The results were computer entered and verified by experienced data processors, and analysed by the project statistician, using up-to-date statistical software. The pupil survey data were cross-tabulated by pupil type: their sex, social class, and levels of attainment and engagement (see section 1.3.1). Pupil responses were also disaggregated by the type of school pupils attended: grammar or secondary, single-sex or co-educational, size, level of free school meals eligibility, ELB location, religious orientation. (Schools' religious orientation was used in place of type of management (e.g. controlled, maintained) because the voluntary schools in the survey sample included institutions of Catholic and Protestant denomination. Thus, throughout the report, where relevant, schools are referred to as Protestant-managed or Catholic-managed.)

The first stage of analysis for both the pupil and teacher case-study interviews (all of which were taped and transcribed verbatim) involved the use of *Winmax*, a software package for qualitative analysis. Coding frames were developed in relation to each of the curriculum design concepts and the interviews coded accordingly, to ensure that frequencies of types of responses and variations between them were systematically categorised. The use of *Winmax* further enabled researchers to analyse teacher and pupil perceptions by the range of variables used in the survey data, and offered sophisticated possibilities for cross-referencing across and within discrete categories of data.

The notes from the classroom observations for each case-study fieldwork visit were analysed in relation to the key curriculum design concepts, and incorporated into discussion of the themes of the research where appropriate. Data from the concept mapping exercises added a further dimension to the analysis, particularly in relation to curriculum coherence.

1.5 Structure of the report

The earlier of the two interim reports on the study (Harland *et al.*, 1999a) outlined the main findings of the case study research on Year 7 pupils in ten primary schools. The second report (Harland *et al.*, 1999b) complemented the previous one by concentrating on the quantitative data collected through the survey of Year 8 pupils in the 51 post-primary schools. The current report represents the culmination of the findings from the entire study thus far.

In order to discern the distinctions between the myriad perceptions of the curriculum emerging from the data, it again proved helpful to adopt the typology introduced in the Report of the Pilot Phase and subsequently deployed in the Year 7 Report (Harland *et al.*, 1999a). This typology distinguished between five different contextual interpretations of 'curriculum':

♦ **curriculum as specified** – by government and its official agents (e.g. in the Attainment Targets and Programmes of Study as set out in the statutory orders of the NIC, as well as non-statutory guidance);

♦ **curriculum as planned** – usually by departments and teachers in schools and summarised in schemes of work;

♦ **curriculum as mediated** – through the 'delivery' by teachers in the classroom or other learning environments;

♦ **curriculum as experienced** – by pupils (individual pupils' immediate involvement in and response to classroom learning activities); and

♦ **curriculum as internalised** – by pupils (how pupils interpret and reconstruct their curriculum as experienced, and what they take away from it in the form of learning outcomes, changed or reinforced attitudes, new awareness or insights and so on).

References to this typology recur throughout the report in relation to the themes of the individual chapters.

2. BREADTH AND BALANCE

2.1 Introduction

For a working definition of breadth and balance, it is instructive to turn to one of the seminal papers that laid the foundations for the development of National Curricula in the late 1980s. In *The Curriculum from 5 to 16*, Her Majesty's Inspectorate (DES. HMI, 1989) described breadth and balance as follows:

> *107. The curriculum should be broad. That is to say in the terms of this paper it should bring pupils into contact with the nine areas of learning and experience* [namely, aesthetic and creative, human and social, linguistic and literary, mathematical, moral, physical, scientific, spiritual and technological] *and with the four elements of learning associated with them* [namely, knowledge, concepts, skills and attitudes]*: not to involve pupils sufficiently in all these areas and elements is to leave their education lacking in some respects. As 'Primary education in England' demonstrated, there is an association between a broad curriculum and successful performance in aspects of language and mathematics. The various curricular areas should reinforce one another: for example ... the scientific area provides opportunities for pupils to learn and practise mathematical skills. Breadth is also necessary within an area and within its components: thus in the linguistic and literary area pupils should read a variety of fiction and non-fiction – myths, legends, fairy tales, animal stories, stories based on family life, adventure stories, historical fiction, science fiction, reference books, factual accounts, documents, directories and articles* (DES. HMI, 1989, p. 42).

> *112. A balanced curriculum should ensure that each area of learning and experience and each element of learning is given appropriate attention in relation to the others and to the curriculum as a whole. In practice this requires the allocation of sufficient time and resources for each area and element to be fully developed. Balance also needs to be preserved within each area and element by the avoidance, for example, of an undue emphasis on the mechanical aspects of language or mathematics, or on writing predominantly given over to note taking and summarising. There should also be a balance in the variety of teaching approaches used: didactic and pupil-initiated; practical and theoretical; individual, group and full class teaching* (DES. HMI, 1989, p. 44).

While fully accepting HMI's case for breadth and balance both within and across different areas of the curriculum, we have directed this study at the latter in order to fulfil our brief to concentrate on the whole curriculum or the curriculum *'as a total package'*. Again, in order to reflect the aims of the research, we have focused on breadth and balance in the content of the curriculum (including knowledge, concepts, skills and attitudes) rather than on issues relating to breadth and balance in the range of teaching and learning approaches used – though it was often difficult to ignore these issues, particularly when examining the evidence collected through the pupil pursuits. Nevertheless, the main research questions addressed in this chapter are:

♦ Are pupils' experiences of the whole curriculum broad enough to encompass all the intended areas of learning?

♦ Are there areas of knowledge and skills that are absent or heavily under-represented in many pupils' curricular experiences – is there a significant 'null curriculum' (Eisner, 1979)?

♦ Are there areas of knowledge and skills that are heavily over-represented in many pupils' curricular experiences – put another way, is there a saturated curriculum?

♦ Are the various subjects and areas of learning each given appropriate quantities of time, attention and status to allow pupils to experience a balanced curriculum?

Interestingly, there have been hardly any other empirically based UK investigations of breadth and balance across the whole curriculum since the introduction of National Curricula (see Lord and Harland, 2000). This is particularly the case in respect of studies that have involved asking pupils for their views on this important curriculum design principle. In contrast, some research into breadth and balance within specific subject areas has been conducted. Kirkman (1993), for example, asked 12-year-old pupils how much time they spend, and how much they would like to spend, using computers at school. Perceptions of balance concerning the relative usage of German and English in Years 10 and 11 German lessons were the subject of research by Neil (1996) in NI. The breadth and balance of the PE curriculum emerged as an issue in Woodhouse's (1996) research on girls' and boys' attitudes towards PE and self-ability concepts. For this author, the implications of the study's findings for a broad and balanced PE curriculum suggested that attention should be drawn to the areas of gym and dance for boys, and athletics and winter team games for girls. There is, however, a dearth of research into similar issues across and between subject areas.

To explore such issues, this chapter presents evidence collected through all the main data collection methods used in the study. Structured around the five curriculum levels described earlier, the chapter starts with a consideration of breadth and balance in the curriculum as specified.

2.2 Curriculum as specified

2.2.1 Within the documentation

Of all the curriculum design characteristics examined in this study, breadth and balance were given the highest profile in the various documents that established the NIC. Breadth and balance were, for example, the only curriculum design features to be given explicit legislative status. That every pupil in grant-aided schools is entitled to a curriculum that is *'balanced and broadly based'* was made a compulsory legal requirement by The Education Reform (Northern Ireland) Order, 1989. The Government's policy paper (DENI, 1988), which preceded the 1989 Order, frequently highlighted the importance of breadth and balance. Launching *'a rounded, balanced educational programme'*, the paper set out the Government's aim to raise educational standards through such measures as the introduction of *'a common curriculum, with associated attainment targets and assessment arrangements, for all grant-aided schools, to ensure equal access to a broad and balanced education for all pupils of compulsory school age'* (ibid., p. 1). Similarly, the Inspectorate was required to *'pay particular attention to breadth and coherence of provision at individual pupil level'* (ibid., p. 9).

The breadth and balance requirement applied to the curriculum of every pupil. It was not enough for a broad and balanced curriculum to be offered by the school; it had to be evident in the experience of every individual pupil (NICC, 1990). However, in order to offer Years 11 and 12 pupils opportunities for choice, some scope for flexibility of provision at Key Stage 4 was acknowledged by the Government – though, and with particular ramifications for Key Stage 3 where there was less concern for choice and flexibility, the main intention of the reforms was the development and implementation of a common curriculum entitlement:

> *It is expected that the effects of the new arrangements will be of particular significance for the secondary sector, because all pupils in all types of secondary schools will be educated within the same curricular framework, undertake the same programmes of study, be assessed against the same criteria and be examined within the same GCSE setting* (DENI, 1989, p.10).

An indication of the areas of knowledge and experience within a broad and balance curriculum found expression in one of the two aims of the NIC, namely one that *'promotes the spiritual, moral, cultural, intellectual and physical development of pupils at the school and thereby of society'*. Comparing these dimensions of development with the HMI's eight areas of experience, it could be argued that 'cultural' may subsume 'aesthetic' and 'intellectual' may embrace such areas as 'mathematical', 'linguistic and literary', 'scientific', 'human and social'. However, for a curriculum purporting to be *'broadly based'*, there are some significant omissions from this specification: for example, creativity, personal, social, emotional, and the hands-on applied aspects of technological development.

At Key Stage 3, the main stage examined in the research, the aspirational goal of a balanced and broadly based curriculum was translated into the following compulsory elements:

Religious Education (with a core syllabus instead of statutory Programmes of Study)

Six Areas of Study (*with contributory subjects in italics*):
English (*English*)
Mathematics (*mathematics*)
Science and Technology (*science, technology and design*)
The Environment and Society (*history, geography*)
Creative and Expressive Studies (*art and design, music, physical education*)
Language Studies (*French OR German OR Italian OR Spanish OR Irish*)

Six Educational or Cross-Curricular Themes
Education for Mutual Understanding
Cultural Heritage
Health Education
Economic Awareness
Careers Education
Information Technology

Some noteworthy omissions from this compulsory list include drama, home economics and personal and social education.

Prescribing optimum times for each of these compulsory areas offered one way of trying to ensure that all pupils experienced a broadly common and balanced curriculum entitlement at Key Stage 3. This measure was rejected when DENI

decided that the amount of time to be given to compulsory subjects would not be specified centrally in legislation, but left to individual schools to determine. This decision was justified in the following terms:

> *Pupils vary considerably in the rates at which they are able to learn and it would be inappropriate, therefore, to establish fixed time allocations that are common to all pupils. Furthermore, schools will wish to provide additional elements that they believe to be particularly appropriate for their pupils and should have the freedom to decide on the relative emphasis to be placed on different elements within the whole curriculum which they are seeking to provide* (NICC, 1991, p. 2).

Moreover, the same source highlighted how further flexibility could be achieved by varying the depth to which the different programmes of study may be studied by children of contrasting abilities:

> *... schools should recognise that, in most subjects, each individual pupil is **not** expected to cover the entire programme of study. Pupils should cover the breadth of content included but the depth of treatment and the precise content covered will depend on the level at which a pupil is working. The programmes of study are **not** schemes of work and there is enough flexibility for schools to devise schemes that suit a particular time allocation and, at the same time, meet the statutory requirements as well as providing for the individual needs of pupils* (ibid., p. 2).

The NICC, however, provided advice to schools on how they might determine appropriate time allocations for various elements of the curriculum (NICC, 1991). Its guidelines are reproduced below in Table 2.1.

Table 2.1   NICC's suggested minimum time allocations

	Minimum percentage time	
	Subject %	Area of study %
English	10	10
Mathematics	10	10
Science and Technology		15
science	10	
technology and design	5	
Environment and Society		10
history	5	
geography	5	
Creative and Expressive Studies		15
PE	5	
art and design	5	
music	5	
Languages		10
French or German or Italian or Spanish or Irish	10	
RE	5	
Total	*75*	

Source: NICC (1991 p. 3)

With 75 per cent of curriculum time considered to be the minimum time to satisfy the legal requirements, the paper suggested that the remaining 25 per cent would be available for each school to use as it thought best: '*Much of this is likely to be used to give more time to particular compulsory subjects but some could be used for optional additions, such as personal and social education or home economics*' (ibid., p. 4). Unlike the National Curriculum in England, the NIC did not formally identify 'core' subjects, though, as the above table shows, the *de facto* core curriculum in terms of the subjects with the greatest recommended amount of time were English, maths, science and languages.

2.2.2 Teachers' perspectives

To gather teachers' perspectives on breadth and balance in the curriculum, during their interviews, they were asked whether they felt that there were areas of the curriculum that received too much or too little time. Although most offered answers which referred to the time allocated to subjects in their particular school – and thus are more relevant to the section on the curriculum as planned – some alluded to issues relating to breadth and balance in the NIC (i.e. the curriculum as specified).

Interestingly, when discussing breadth and balance, some teachers used the term 'core' curriculum, in spite of the fact that this category was not formally applied in the NIC documentation. In the main, teacher interviewees used 'core' to refer to the emphasis on English and maths, and occasionally science. Languages were not associated with the 'core' concept, even though on a *de facto* basis, they were recommended the same amount of minimum time as English, maths and science. In many respects, the notion of a 'core' element within the prescribed curriculum seems to have been imported – perhaps rather uncritically – from the National Curriculum in England rather than based on any objective assessment of the actual emphases given to different subjects that make up the curriculum in NI.

Of those teachers whose comments could be interpreted as referring to the curriculum as specified (e.g. in offering opinions about the NIC rather than their schools' implementation of it), the majority viewpoint was that it was right and fitting that what were deemed to be the 'core' subjects (namely, English, maths and occasionally, science) should be allocated more time than other subjects. It is of some significance, though, that languages were not grouped within the 'core' and were generally not held in the same regard as English, maths and science. Amongst those who approved of the enhanced time commitment to these three subjects were some Year 7 teachers who justified an emphasis on the 'core' by explaining that pupils needed the skills they learnt in these subjects to access other subjects, and that the core subjects warranted more time because pupils needed to be prepared for the Transfer Test. Roughly similar proportions of grammar and secondary school teachers voiced support for the prioritisation of English, maths and science.

Two contrasting minority stances were expressed. Firstly, a small number of teachers – with approximately similar proportions from grammar and secondary schools – argued that more time should be given to the 'core' subjects (as denoted above). None of the Year 7 teachers subscribed to this view. Secondly, another, slightly larger, group believed that the time and status allocated to 'core' subjects should generally be reduced. Interestingly, this opinion was not expressed by any interviewees from secondary schools, with a disproportionately high number emanating from Year 7 teachers and the remainder from grammar school teachers. The remarks made by the Year 7 teachers related mostly to the manner in which the Transfer Test distorted the allocation of time to various subjects, at least until the Test was over. Some teachers mentioned relegating the teaching of 'non-core'

subjects to '*offering bits of the other subjects in between*' as a '*relief*' from teaching the 'core'.

Generally speaking, most of the teacher interviewees were broadly satisfied with the breadth and balance contained in the curriculum as specified. The following comment (on the Year 8 curriculum in particular) was fairly typical:

> *I think they have got a fairly good balance there of everything, their science, the language, maths, English, then history and geography, a bit of music as well, and then their practical subjects with IT, and they have technology, so I don't think there is anything that I could say there that they are missing really* (French teacher).

In similar tones, several post-primary teachers suggested that the Key Stage 3 curriculum was broad enough. Year 7 teachers, however, were less likely to express this view, most likely a reflection of their concern that in practice the preparation for the Transfer Test made it difficult to achieve the breadth intended in the curriculum as specified.

Among the post-primary teachers who were more critical about the breadth and balance in the specified curriculum were a small number who commented on the lack of flexibility and differentiation according to pupils' diverse interests or aptitudes. For these teachers, the NIC was too uniform and failed to cater for the different needs of individual learners; thus, what was broad and balanced for one pupil may not be broad and balanced for another (e.g. modern languages was often cited in this respect). In contrast, two grammar school teachers believed that the Key Stage 3 curriculum was too broad and provided too much variety for the children to cope with, especially just after Key Stage 2 where pupils had experienced a limited range of subjects. A reduction of in-depth learning in a range of key subjects was seen as a regrettable consequence of this over-broad curriculum:

> *I think it's actually widening out quite a lot now, and I would say that maybe a lot of the ... a lot of the expertise has been lost in individual subject areas because we have to cover so much and they have got to get such a broad picture. ... I think they have a tremendous range, and maybe it is becoming increasingly difficult for them to cope* (RE teacher).

As hinted at in the above comment, such views were allied to the more frequently expressed opinion that breadth in the curriculum had led to, or at least had been achieved at the expense of, an overloaded curriculum. From this perspective, the curriculum was simply too full in terms of the amount required in each subject:

> *I think there's an awful lot of work in Year 9. You really need to economise with your time on each topic. Some of them* [pupils] *would like to spend more time on things that are of interest to them, for example, the Plantations. They enjoyed doing that, but everything you do, you have to really economise with your time because there's such a big area* (history teacher).

Signalling some dissent from the previous two observations (i.e. that the NIC is over-broad and overloaded), one of the most commonly cited criticisms was that the Key Stage 3 curriculum lacked balance in that several minority subjects were not afforded sufficient status and time relative to the 'core' subjects. This view was much more likely to be advanced by grammar school teachers. For example, one senior teacher with responsibility for the curriculum in a grammar school stated:

Interviewee: *The so-called minority subjects are music and so on. What we're trying to do is extend the provision there, give them more opportunity. But we're looking at not just Year 8, but 8, 9 and 10, in order to spread, you know, the timetable and so on.*

Interviewer: *Why do you see those as the minority subjects then?*

Interviewee: *Right. When they come to make choices at the end of third form for GCSE, those subjects tend to get squeezed a little. The NIC specifies that you must do English, maths and a language, a balanced science programme, and 'Environment and Society'. It doesn't leave much room for choice. Currently, if someone does the three sciences and 'Environment and Society', they have no choice here. So subjects like art, the second language, music, home economics, technology, they get squeezed so their numbers would be smaller than other subjects, and that would give every reason for calling them ... the so-called minority subjects ... They would have fewer teaching periods in Key Stage 3.*

Another grammar school teacher (technology) referred to the minority areas as 'satellite subjects': *'You know, you have the major planets and you have your satellites which are there and we get our time, but we don't get enough time.'* However, to examine the issue of the proportion of time allocated to the 'planets' as opposed to the 'satellites' (not to mention some possible 'black holes'), along with other related issues, we need to move on from the specified NIC to consider breadth and balance in the curriculum as it has been implemented in schools. To do this, we look first at the curriculum as planned in schools.

2.3 Curriculum as planned

In this section, we describe the results of some detailed examinations of the extent to which breadth and balance were evident in the amount of time that schools devoted to different areas of the Key Stage 3 curriculum. We also outline teachers' and pupils' views on the curriculum as planned and structured by schools.

2.3.1 Time for different areas of the curriculum

Analysing the timetables

Given that the amount of exposure to different areas of the curriculum is likely to be a major determinant of the degree of breadth and balance experienced by pupils, it was felt that an examination of the time allocated to each subject was a necessary precursor to any analysis of pupils' perceptions of breadth and balance. In order to examine schools' allocation of time to different areas of the curriculum, two forms of analysis were conducted:

◆　　a timetable analysis – from the timetables provided by the survey schools, the percentages of time allocated to each subject as a proportion of the total weekly teaching time were calculated for each of the three years that make up Key Stage 3;

◆　　a curriculum analysis – the results of the timetable analysis for Year 10 were then used to construct a curriculum portrait of each of the participating schools, based on the identification of subjects that they accentuated, those to which they gave less time and those that they omitted altogether – their 'null curricula' (Eisner, 1979).

From these analyses, four key findings clearly emerged:

1. While schools may work to a common curriculum framework (curriculum as specified), at the level of implementation in schools (curriculum as planned) the NIC does not exist as a single common entity and, in reality, schools offer pupils NI 'curricula' rather than a NI 'curriculum'.

2. Different types of curricula are provided by different types of schools, which pupils attend, largely according to religious orientation and performance in the Transfer Test (for English, maths and science) rather than on the basis of their needs, interests and aptitudes across the whole range of subjects specified in the NIC.

3. Only a very small minority of schools (four per cent) were meeting the minimum percentage time allocations recommended by NICC (1991) in all subjects.

4. Examined from a comparative perspective, few schools exhibited a broad and balanced curriculum.

Each of these four points is considered in turn, and in the first two, further details of the two main forms of analysis are provided.

Common curriculum framework; diverse curricula

Although the analysis of timetables is subject to several methodological limitations, it undoubtedly provided several interesting insights into the way schools allocate time to different areas of the curriculum. Of the 51 schools in the sample, the majority (43) supplied copies of their teaching timetables for each of the three years of Key Stage 3 – where these varied between forms, multiple versions were provided. Using these timetables, calculations were made for each school of the length of the teaching week and the average time allocated to each subject. A maximum of 22 subjects were included in the analysis, including some which were not part of the compulsory NIC, such as drama, PSE and form periods, but were common in schools. The amount of time spent on each subject per week was calculated to the nearest minute.

In order to standardise the timetables as much as possible, a number of adjustments were necessary. In the main, these comprised:

- Where subjects were taught in modules, the amount of time spent was corrected to be representative for the whole year.

- When different forms in a school spent different amounts of time on different subjects (owing to different period lengths), the average was taken.

- When a majority of forms in a school spent the same length of time on a subject but a minority did not, the time spent by the majority was used.

- Time spent on French, Spanish, Irish and German was recorded under the generic category of 'languages' for statistical reasons: in several schools, pupils spent the same length of time on languages, yet the language(s) they learned varied depending on the form they were in or on what they had elected to study from the options offered by the school. In one school, Latin was included in the category 'languages' because it was one of three options from which pupils could choose a language to study. In another school, however, all the pupils learned Latin and this was treated separately.

- Biology, physics and chemistry were collected into science.

- A number of topic or subject areas were subsumed into others (e.g. library into English, 'Education for Love' into PSE).

- In schools with a two-week timetable, the amount of time spent on each subject was divided by two. In the school with a six-day timetable, the number of minutes per six days was multiplied by five-sixths to give number of minutes over five days.

- Form period was taken to be a specific timetabled lesson called form period, tutorial, etc. Registration time was not included in this category even if registration was called 'form period' by the school. Exceptionally, one school had form period for 30 minutes each day.

- Only three schools scheduled health education as a separate subject, but this subject matter might have been covered in other schools within science, home economics, PE or PSE as a cross-curricular theme.

Table 2.2 displays the mean, maximum and minimum number of minutes per week for each of the main 20 subjects taught in Year 8 at the 48 schools for which data were available. Thus, by way of illustration, the table shows that the average time allocated to English in Year 8 was 197 minutes (three hours 17 minutes) per week, but the school with the highest time commitment to English gave the subject 260 minutes, whereas the school with the lowest time for English afforded it 160 minutes – a difference of 100 minutes (one hour 40 minutes per week).

Table 2.2   Year 8 teaching time (in minutes) per week for subjects

Subject	N of schools	Mean	Maximum	Minimum
English	48	197	260	160
Maths	48	185	221	150
Languages	48	180	350	102
Science	48	164	210	120
History	48	112	150	90
Geography	48	112	165	90
RE	48	99	175	40
PE	47	92	160	35
Technology	48	91	150	31
Home economics	41	81	120	55
Art	48	76	120	45
Music	48	68	105	35
IT	40	41	77	17
PSE	23	37	67	30
Form period	21	41	150	30
Drama	17	40	70	13
Games	13	67	80	35
Classics	3	83	145	35
Health education	3	43	60	35
Latin	1	100	-	-

Source: *NIC Cohort Study: Year 8 School Survey*

A striking feature evident in Table 2.2 is the wide range in time allocation for many subjects between schools. This clearly shows that the amount of time Year 8 pupils spend on different areas of the curriculum varied substantially from school to school. For example, pupils at some schools (virtually all Catholic-managed

ones) studied languages for almost six hours a week, while those at other schools did less than two hours; one school taught 75 per cent more science than another; RE and technology in some schools were given over four times the amount of time they were afforded in other schools; music deviated by a factor of three; art varied by a factor of over two-and-a-half; and the degree of provision of cross-curricular themes like health education (HE) and IT also varied.

Very similar variations emerged when the Year 9 data on timetables were analysed in the same way. The amounts of time spent on languages by various schools ranged from 363 minutes (six hours three minutes) to 105 minutes (one hour 45 minutes) per week. Eleven of the 16 schools that taught languages for four hours or more per week were Catholic-managed, as were the three schools that spent over five hours a week teaching languages. This is particularly striking when one considers that seven schools offered their pupils two hours or less of language study per week. Interestingly, in Year 9, languages had overtaken English, maths and science as the subject area with the highest average time commitment.

Other noteworthy Year 9 differences included: one school taught 50 per cent more time on science than another; time spent on music and home economics deviated by a factor of three; and, as in Year 8, there were considerable variations in time allowed for the provision of cross-curricular themes like HE and IT.

Table 2.3 presents the comparable results for Year 10.

Table 2.3   Year 10 teaching time (in minutes) per week for subjects

Subject	N of schools	Mean	Maximum	Minimum
Languages	49	192	420	105
English	49	186	240	145
Maths	49	186	240	145
Science	49	184	249	140
History	49	111	160	80
Geography	49	110	140	80
RE	49	99	165	60
Technology	49	96	145	44
PE/Games	49	95	155	53
Art	49	81	120	27
Home economics	41	76	105	27
Music	47	65	105	18
Form period	23	47	200	17
IT	24	17	70	15
PSE	17	35	60	20
Drama	17	35	67	10
Health education	2	29	40	18
Latin	1	72	-	-

Source: *NIC Cohort Study: Year 10 School Survey*

Table 2.3 shows that the wide variations evident in Years 8 and 9 were clearly apparent in Year 10, with some differences intensifying. Again with Catholic-managed schools offering most provision, the amounts of time spent on languages by various schools ranged from 420 minutes (seven hours) to 105 minutes (one hour 45 minutes) per week. Compared with Year 9, this represents an increase in the difference between the highest and lowest of one hour, so that the variation at Year 10 is a substantial five hours and 15 minutes – equivalent to one full day at

school. Continuing the pattern established in Year 9, languages remained the subject area with the highest average time allocation in Year 10.

Compared with Year 9, variations in the time for the creative arts subjects grew even larger in Year 10: time spent on art differed by a factor of four-and-a-half, in Year 10, and music by a factor of almost six. Considerable differences were also apparent for home economics, technology, RE and even history, to which one school gave twice as much time as another school. Other appreciable differences shown in the table include science, which one school taught 75 per cent more than another. Again, as in Years 8 and 9, there remained extensive variations in the time allocation for cross-curricular themes like HE and IT. With regard to the latter, it is noticeable how IT declines as a discrete offering over the course of Key Stage 3: in Year 8, 40 schools provided it as a separate subject, with an average time commitment of 41 minutes (see Table 2.2), whereas in Year 10, only 24 schools offered it in this form, with a much reduced average of 17 minutes (see Table 2.3).

While each of the three years that comprise Key Stage 3 shows similar and substantial variations in the time allocated to different subjects, it is theoretically possible that schools alter the balance of the time they give to different subjects each year so that over Key Stage 3 as a whole, the annual variations are ironed out. To explore this possibility, the amounts of time devoted to each subject in Years 8, 9 and 10 were totalled for each school (assuming that each year had 38 teaching weeks in the school year). The overall ranges, as well as the ranges for secondary and grammar schools, are set out in Table 2.4.

Table 2.4   Estimated total Key Stage 3 teaching time (in hours) for each subject

Based on a total of 43 schools; rounded to nearest hour; and in order of magnitude of time taught.

Subjects	Overall		Secondary		Grammar	
	Max.	Min.	Max.	Min.	Max.	Min.
Languages	709	213	532	213	709	339
English	424	304	424	304	403	304
Maths	424	285	402	285	424	286
Science	418	247	377	247	418	293
History	244	171	243	171	244	188
Geography	244	171	238	171	244	187
PE/games	301	114	301	114	285	122
RE	314	114	312	114	314	127
Technology	281	99	281	114	201	99
Art	209	111	209	114	172	111
Home economics	200	17	200	17	163	97
Music	200	67	200	67	165	95

Source: *NIC Cohort Study: Years, 8, 9 and 10 School Surveys*

Clearly, Table 2.4 shows that the variations revealed on a year-by-year basis are not eroded by considering the overall provision throughout Key Stage 3. Some very substantial differences remain and, interestingly, these variations are often as large within different types of post-primary schools, as between them. Overall, languages were prone to the greatest variation: a difference of almost 500 hours, with appreciable discrepancies within the secondary and grammar school sectors. Music, technology, RE, PE and art all show marked tendencies to be allocated contrasting amounts of time.

Some of these differences reach such proportions (e.g. in languages, music and technology) that they beg the question whether it is really feasible for the same Programmes of Study to be applicable to all circumstances. It would seem, for example, that what can be achieved in 67 hours of music provision is vastly different to that which can be accomplished in 200 hours. Most probably, such differences would have implications, not only for the depth to which the subject can be studied, but its breadth and scope as well. Consequently, the depth and breadth of such a subject offered to pupils in one school will be significantly different from that which is mounted for pupils in another school.

These variations, coupled with case-study evidence on their implications for the quality of curricular experiences, support the view that, at the level of classroom practice and pupil learning, the NIC as a single common entity or experience does not exist. It only exists in that form within the curriculum as specified. Consequently, in terms of reviewing the curriculum as implemented, it makes much more sense to talk about NI 'curricula' rather than the NI 'Curriculum'. The implications of this are considerable. Instead of asking, for example, '*Is the NIC effective in aiding pupil learning and meeting their needs?*', it is far more accurate and helpful to ask '*Which of the NI curricula are most effective in aiding pupils' learning and meeting their needs?*'

It also raises questions about whether certain types of curricula in NI can be identified. Given that, at the level of implementation in schools, there is a plurality of curricula, are these simply a random pot-pourri of different approaches or do they display discernible patterns that allow them to be classified into different types? If the latter, are different types of pupils aligned to the different types of curricula and if so, according to what criteria? It is to these questions we turn in the next section.

Types of curricula; types of children

This curriculum analysis was carried out on the Year 10 allocations of time. Using the timetable data described above, we constructed a curriculum portrait for 49 schools. For each school, the following dimensions were calculated and noted:

1. subjects that the school was 'heavy on' – namely, subjects that received at least 0.5 more than the mean average percentage of weekly time (for all schools) were noted in normal text; those that received at least one per cent more than the mean percentage were recorded in bold; though for those subjects that were given ten per cent recommended minimums by NICC (i.e. English, maths, science and languages), the respective qualifying deviations had to be at least 1.5 or two per cent above the mean percentage;

2. subjects that the school was 'light on' – namely, subjects that received at least 0.5 less than the mean average percentage of weekly time (for all schools) were noted in normal text; those that received at least one per cent less than the mean percentage were recorded in bold; though for those subjects that were given ten per cent recommended minimums by NICC (i.e. English, maths, science and languages), the respective qualifying deviations had to be at least 1.5 or two per cent below the mean percentage;

3. the null curricula – common subject areas (not necessarily those specified in the NIC, but subjects found to be taught in other sample schools) that were not included at all in the Year 10 timetable (though they may have been taught as 'infusions' in other subjects);

4. the percentage of time allocated to the four subjects that were given most time;

5. the total number of subjects covered; and

6. whether or not the school was meeting NICC's minimum requirements in all subjects.

To illustrate the above, each of the above dimensions can be seen in the completed 'portrait' for one school:

Table 2.5   Example of curriculum portrait

School Number 49	
1. Subjects heavy on (very heavy are in bold)	Home economics, history, geography, art, **PE/games**, IT
2. Subjects light on (very light in bold)	Science, **RE, languages**
3. Null curricula	Form period, careers education, drama, economic awareness, health education
4. Top four	43 per cent (English, maths, science and languages)
5. Number of subjects	14
6. Meeting minimum requirements in all subjects?	No

Source: *NIC Cohort Study: Year 10 school survey*

The completed profiles were then searched for observable patterns in the characteristics of their curricular highs and lows. As in the construction of the profiles, this was done anonymously so that the identity of the schools and any of their attributes could not influence the classification process. The analysis identified six clear groups, into which all but one of the schools fell. This school remained something of an anomaly. The groups represent six main types of curricula in NI, and are summarised below.

- The **RE and languages light** curriculum. Eleven schools had Year 10 curricula that gave relatively low amounts of time to RE and languages. In eight of the 11, both these subjects appeared in bold (i.e. the allocated times were well below the norm); in the other three schools, languages were bold (signifying very light provision), while RE was still recorded as light. Five of them were also light on science. In contrast, PE/games was often accentuated in this type of curricula: in nine of the 11 schools, this area of the curriculum was emphasised (eight were bold). Accentuation on home economics (cited in seven) and art (cited in six) was also a tendency. Hence, in many respects, these schools exhibited a practical activity-oriented curriculum, with noticeably below average time allocations for RE and languages. This practical activity bias was underlined still further by the finding that of all the six types of curricula, this one was most likely to include IT as a separate subject in Year 10: only two of the 11 schools did not offer IT and three gave it more than the average time. Furthermore, compared with other types of curricula, these schools were the most likely to offer either form periods or dedicated PSE programmes in the Year 10 curriculum.

- The **RE and languages heavy** curriculum. Six schools had Year 10 curricula that gave relatively high amounts of time to RE and languages; four of these had both subjects in bold. Music was emphasised in three of these schools and drama was less likely to be part of the null curricula. A highly consistent feature of this type of curriculum was the conspicuously reduced time devoted to PE/games – this subject area was recorded in the 'light' category for all six schools (three in bold). English and technology were also afforded less than average time in four of the schools. In keeping with these tendencies, only one of the six schools displaying this type of curriculum provided IT as a separate subject. Moreover, none of the schools included a dedicated PSE programme on their timetable.

- The **RE heavy and languages light** curriculum. In the profiles for 11 schools, RE was registered as heavy (seven bold), while languages were light (ten bold). This type of curriculum was also likely to emphasise history and geography: eight of the 11 schools gave above average time to these subjects. These emphases evoke a manifestation of a humanities-oriented curriculum: RE, history and geography. Seven of the schools also accentuated technology. Relatively speaking, drama was well represented in this type of curriculum. The subject most likely to be given less emphasis was science, which appeared in the 'light' category for five of these schools (three bold).

- The **languages heavy and RE light** curriculum. Almost as a mirror image of the previous type, the profiles for seven schools displayed languages as heavy (six bold) and RE as light (six bold). Again in contrast to the previous type, an accent was frequently placed on science in these schools, with five of the seven affording above average time to this subject area. Hence, here there emerges a linguistic-scientific-focused curriculum that is at variance with the previous one that was biased towards the humanities. Reflecting an important imbalance in the linguistic-scientific curriculum, these schools often paid less attention to art and technology – as many as six and five (respectively) of them allocated less than average time to these subjects. Similarly, drama was unlikely to be offered as a separate subject. In addition, of all the types of curricula, this one included more schools that provided neither form periods nor PSE on their timetables.

- The **languages light** curriculum. Eight schools had Year 10 curricula that granted reduced amounts of time to languages; all eight were classified as being 'very light' (i.e. in bold, relative to the average time) in this area of the curriculum. The other subject that was most likely to receive less than average time in these schools was music (registered as bold in four of the eight schools). Interestingly, comparatively large amounts of time were given to technology (recorded as 'heavy or 'very heavy' in seven of the eight schools), art (also seven schools), home economics (six) and PE/games (six). Hence, in many respects, these schools adopted a practical activity-oriented curriculum similar to the first type of curriculum above, but without the noticeably below average time allocations for RE, which were a defining feature of the first type. These schools were also likely to offer dedicated PSE programmes in the Year 10 curriculum. Drama, however, was unlikely to be offered as a separate subject in this type of curriculum.

* The **languages heavy** curriculum. Five schools prioritised languages (all were found to be very 'heavy' on this area of the curriculum), while providing something close to the average time for RE. Art and PE/games tended to be given less than average time. This tendency towards a less applied and activity-oriented curriculum was reinforced by the finding that of all the six types of curricula, this one was the least likely to provide IT in the Year 10 curriculum as a separate subject: IT appeared in all these schools' null curricula categories.

Having identified these six types of curricula, we then studied the extent to which each one may be associated with different school and pupil types. Summarised in the table below, some interesting results emerged.

Table 2.6   Type of curricula by type of school

Type of curricula	Description	Dominant association
RE and languages light	All but one of the 11 schools was Protestant-managed. The exception was an integrated school. All the schools apart from one were secondary schools. The exception was a grammar school.	Protestant-managed secondary schools
RE and languages heavy	All of the six schools were Catholic-managed. All the schools apart from one (a secondary school) were grammar schools.	Catholic-managed secondary schools
RE heavy and languages light	All but one of the 11 schools was Catholic-managed. The exception was a Protestant-managed school. They were all secondary schools.	Catholic-managed secondary schools
Languages heavy and RE light	All but one of the seven schools was Protestant-managed. The exception was a Catholic-managed school. They were all grammar schools, apart from one that was a secondary school.	Protestant-managed grammar schools
Languages light	All but two of the eight schools were Protestant-managed. The two exceptions were both Catholic-managed. They were all secondary schools.	Protestant-managed secondary schools
Languages heavy	Four of the five schools were Catholic-managed; the fifth was an integrated school. Three were secondary; two were grammar schools.	Catholic-managed secondary or grammar schools

Source: *NIC Cohort Study: Year 10 school survey*

To sum up our interpretations of the evidence so far, we have argued that, at the level of implementation, the wide variations in the time allocated to different subject areas by different schools challenge the assumption of a single and commonly available NIC at Key Stage 3. The evidence set out above clearly demonstrates that such variations are not the result of a randomised set of curricular offerings by individual schools. Instead, distinct patterns are evident and there are a limited number of overarching types of Key Stage 3 curricula which the majority of schools select and provide according to systematic differences in priorities, traditions and values.

Languages and RE emerged as the curriculum areas at the forefront of the demarcations between one type of curriculum and another, but other areas such as history, geography, the creative arts, technology, PE, science, English and PSE also deviated substantially between the different types. Accordingly, although the various types of curricula have been labelled through reference to RE and languages, it is manifestly not the case that the variations are limited to these two areas of the curriculum.

The revealing associations displayed in Table 2.6 establish that close links exist between different types of Key Stage 3 curricula and different types of school, principally their religious orientation and their location in the selective post-primary system. Hence, for example, children who attend a Catholic-managed grammar school will be offered a different type of curriculum (i.e. most probably a 'languages heavy' or 'RE and languages heavy' curriculum) from those who attend a Protestant-managed secondary school (i.e. most probably a 'languages light' or 'RE and languages light').

The absence of a common Key Stage 3 curriculum that is widely available for all pupils in NI may not be construed as a problem. Indeed, the evident variations in curricula could be defended, and even promoted, on the grounds that diversity at Key Stage 3 is educationally beneficial and therefore a virtue. However, whatever stance is taken on the merits of diversity in curricula at Key Stage 3, most would agree that if such diversity is to be defended, then the accessibility of all pupils to the various curricula becomes a much more critical issue than it is when all schools offer pupils a broadly comparable curriculum. If all pupils are not to be provided with access to a broadly comparable curriculum, then the methods by which they are matched to different types of curricula assume the uppermost importance. Thus, some critical questions can be asked of NI's present system of diverse curricula at Key Stage 3: do pupils have access to all types of curricula (as distinct from types of schools)? if not, what are the criteria used to select children for different types of curricula? are these criteria appropriate and relevant to the curricular experiences they are being selected for?

Given that the types of curricula are closely aligned with types of schools, most of which tend to assemble pupils according to their religious orientation and their performance in the Transfer Test, it would seem difficult to argue that pupils enjoy open access to all types of curricula. From this, it would appear that the criteria used to select pupils to types of curricula are the same as those presently serving to group pupils into different types of schools, namely religious orientation and their performance in the Transfer Test. Significantly, in the current system these criteria seem unrelated to the specific type of curricular diet that individual children are being offered – or at best the relationship between the criteria and the version of the Key Stage 3 curriculum on offer to a child is not made clear. What relevance, for example, does a pupil's Transfer Test performances in the subjects of English, maths and science have for how much time they will be allowed to study languages, the creative arts, technology, IT, PE and PSE?

Minimum time allocations

As one means of exploring breadth and balance in the curriculum as planned, the times allocated by schools to each of the NIC subject areas in Year 10 were examined in order to establish how many schools were meeting or exceeding the minimum percentages recommended by NICC (NICC, 1991; see Table 2.1 above). Of the 49 schools who provided sufficient data for this analysis, only two were found to be meeting the recommended percentages in all NIC subjects. Put another

way, 96 per cent of schools were not satisfying the recommended levels in at least one subject. Not surprisingly, the more schools gave a disproportionately high amount of time to a select group of subjects, the greater the likelihood that at least one other subject would receive less time than suggested by NICC. Interestingly, one of the two schools that satisfied the recommended levels had not a single subject in bold for the 'heavy on' category of their curriculum profile (i.e. none that were well above the average); the other school had only one subject in this category. The percentages for these two schools, along with the NICC suggestions for minimum percentages, are set out in Table 2.7. The table shows that, to achieve these times, both schools were using some of the extra 25 per cent of time that NICC left available for schools to use at their discretion.

Table 2.7   Percentages of time given to NIC subjects in Year 10 in two schools that met the minimum recommendations

Subject	School 1	School 2	NICC recommended percentages
Type of curriculum:	Languages light	RE and languages heavy	
	%	%	%
English	12	10	10
Maths	12	10	10
Science	12	15	10
Languages	10	15	10
History	8	7.5	5
Geography	8	7.5	5
Technology	6	5	5
RE	6	7.5	5
PE	6	5	5
Art	6	5	5
Music	6	5	5

Source: *NIC Cohort Study: Year 10 school survey*

The subjects that were most likely to be afforded less than the minimum recommended time – in many respects, the casualties caused by putting the accent on other subjects – were music (allocated less than five per cent in 40 of the 49 schools), art (25 schools), PE/games (18 schools), technology (15 schools), RE (14 schools) and languages (14 schools). To this extent, the findings justify the view that the introduction of the NIC does not appear to be protecting 'satellite' or 'minority' subjects like the creative arts. Predictably, the subjects found to be given less than the suggested times varied according to the six types of curricula described above.

Timetabling for breadth and balance in the curriculum?

The evidence presented thus far in this section has indicated that the prevailing timetabling policies in many post-primary schools impose limitations, in some cases severe limitations, on the opportunities for Key Stage 3 pupils to experience a broad and balanced curriculum. The wide ranges in time afforded to different subject areas across all three of the years that comprise Key Stage 3 illustrate the very high and low amounts of time that some schools allocated certain subjects – allocations which undoubtedly precipitate imbalances and lack of breadth elsewhere in the curriculum. These tendencies towards imbalances were further demonstrated in the descriptions of the different types of Year 10 curricula. The

'languages heavy and RE light' curriculum, for example, was strongly skewed towards languages and science, often at the expense of the creative arts, technology and PSE. Alternatively, another version of imbalanced curricula was exemplified in the 'RE and languages light' curriculum, which accentuated practical activity-based subjects (e.g. PE, home economics, art, IT), while reducing time for RE, languages and science. Over the sample of schools as a whole, the notion that Year 10 pupils are experiencing a broad and balanced curriculum was further challenged by the finding that 82 per cent of schools gave less than five per cent of curricular time to music (in some cases, much less than five per cent); 51 per cent did similarly for art; 37 per cent for PE/games; and 31 per cent (almost a third of all schools) for technology.

A further feature of several of the Year 10 curricula was the manner in which the allocation of disproportionately high quantities of time to certain subject areas reduced the breadth of the whole curriculum and distorted it to the point of serious imbalance. For example, 18 (37 per cent) of the schools devoted more than 15 per cent of their Year 10 curricular time to languages; these 18 included four schools which gave this area more than 20 per cent, with one allocating as much as 27 per cent. To varying degrees, the impact of such policies was that pupils experienced narrower and heavily skewed curricula. By way of illustration, in the school where languages were granted 27 per cent of the available curricular time, technology, art, music and PE all received less than the recommended minimum times and the null curricula included home economics, PSE, form periods, drama, careers education and IT – while none of these is legally required to be taught as a separate subject in the NIC, these subjects formed part of many sample schools' curricula. As another indicator of the intensive focus of the curriculum at this school, 62 per cent of the available time was spent on languages, English, maths and science. This school was not alone in this tendency: 35 per cent of all schools set aside over 50 per cent of the curricular time for their main four subjects, predominantly languages, English, maths and science.

As an attempt to identify schools with the broadest Year 10 curricula, five schools were found to have only three subject areas (including some cross-curricular themes) in the null curricula category. Typically, these included careers education, economic awareness, health education, drama, PSE and form periods. Interestingly, three of these five schools adopted the 'RE and languages light' curricula, with the schools restricting the amount of time they allocated to the main four subjects to an average of 44 per cent. In the difficult context of a polarised set of curricular types, these schools do at least demonstrate that it is possible to provide a broad curriculum that is as balanced as perhaps the circumstances allow. Across the majority of schools, however, finding breadth and balance in the curriculum as planned is often problematic, to say the least.

2.3.2 Teachers' perspectives

Since teachers' views on breadth and balance in the curriculum as planned echoed their opinions on the curriculum as specified – indeed, the two were often indistinguishable – they need not be replicated here. Apart from those teachers who expressed concerns about the status and time given to satellite or minority subjects, most teachers generally approved of the overall shape of their school's curriculum and the time allocations to different subject areas. Perhaps inevitably, it tended to be the teachers of the so-called minority subjects, or occasionally senior staff with responsibility for the Key Stage 3 curriculum, who voiced misgivings over the limited time afforded certain subjects and its consequences for offering pupils a curriculum that was not as balanced as it could or should be.

2.3.3 Pupils' perspectives

In their interviews, a number of pupils made explicit reference to breadth and balance in the curriculum as planned. Comments bemoaning the heavy timetable allocation to English, maths and languages and the limited provision of PE, IT and the arts figured prominently in pupils' discourse and will be discussed in depth under 'the curriculum as experienced'. Although later sections of this chapter will show that pupils had many strong opinions on breadth and balance, it should also be noted that a small group of youngsters were willing to bow to their teachers' or schools' better judgement – '*I know that the teachers are spacing their timetables out right and ... take it at a pace that we can learn everything and not rush*' (male, Year 10) – or simply took the curriculum on trust: '*I just leave it all in the hands of the teachers*' (male, Year 8).

2.4 Curriculum as mediated

2.4.1 Pupils' perspectives

Regardless of the amount of time given to subjects, there was evidence that the mediation and content of the curriculum could prompt pupils to feel that they had done too much or too little of a subject: mention was made of pedagogy and teachers' own personalities.

Subjects which consistently involved '*lots of writing*', '*reading*' and particularly '*the teacher talking all the time*' were liable to be declared over-represented by pupils. Slow and repetitive mediation – '*our teacher just goes over the same thing again and again*' – prompted the same response. Although less frequently mentioned, poor classroom control made pupils feel that they had done too little in a subject: '*In English, the teacher I have got now doesn't really get the attention of my class and doesn't do much work ... having him is like having a free period ... he doesn't learn you anything*' (female, Year 9). Additionally, lesson time spent on administrative tasks impacted upon pupils' perceptions: referring to an art lesson on an observed day in Year 9 during which the teacher spent half the time collecting in each individual's homework or hearing their excuses whilst the class waited, one interviewee declared how '*annoying*' this was and estimated that consequently the class spent '*about 20 minutes*' of a lesson lasting one hour and 20 minutes '*actually working*' (male, Year 9).

Very infrequently cited (offered mainly by low-attaining interviewees), pupils' personal feelings about a teacher could influence their views on whether a subject was under- or over-represented: liking a teacher prompted them to want more: '*Maths .... I would like to do it nearly every day. Maths is really brilliant, especially the teacher. He's a really nice teacher*' (female, Year 8). Dislike obviously had the opposite effect: '*Too much English, because I don't like English – it's the teacher*' (male, Year 10).

The persistent absence of the teacher due to illness was also highlighted when pupils were discussing subjects on which they had done too little. Interestingly, perhaps, this was mainly cited in relation to practical subjects – as Chapter 7 shows, those most enjoyed by pupils, so presumably those they found most irksome to miss.

2.5 Curriculum as experienced

Both the annual pupil surveys and the interviews conducted in the case-study schools sought pupils' views on the breadth and balance of the curriculum they experienced. Pupils' perceptions are presented in two sections.

♦ Firstly, their perspective on balance in the curriculum is discussed, that is their opinions on the various time allocations for the subjects they currently study. Within this, the questionnaire findings are presented first, followed by an analysis of the case-study data from which pupils' various motives for wanting more or less of a subject were gleaned.

♦ Secondly, their views on the breadth of the curriculum are presented, that is the areas currently omitted from the curriculum they experience which they would like to be included. Again, the survey findings for this are relayed first, followed by the perspectives of the case-study interviewees.

2.5.1 Pupils' perspective on balance in the curriculum

This first section analyses pupils' perceptions of the division of the timetable they experience: their opinions of the amounts of time allocated to each of the subjects they study.

In the annual questionnaire, pupils were requested to indicate, on a five-point scale, if they thought that they did 'too much' or 'not enough' of each of their main subjects. Table 2.8 below gives the overall mean scores for each subject, and the disaggregation by type of school for each subject for each year of Key Stage 3.

Table 2.8 **Pupils' perceptions of the time spent on their subjects by type of school and year group**
1 = too much; 5 = too little
(i.e. the lower the mean, the more pupils felt they received too much)

Subject	Year 8			Year 9			Year 10		
	Overall mean	Sec. mean	Gram. mean	Overall mean	Sec. mean	Gram. mean	Overall mean	Sec. mean	Gram. mean
French	2.7	2.7	2.6	2.6	2.7	2.5	2.6	2.7	2.4
English	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6
Maths	2.7	2.7	2.6	2.6	2.7	2.6	2.7	2.7	2.6
RE	2.8	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.7
Irish	2.8	2.8	2.9	2.9	3.1	2.7	2.8	3.0	2.7
Science	3.1	3.1	3.0	3.0	3.0	3.0	2.9	2.9	2.8
Geography	2.9	2.9	2.9	3.0	3.0	2.9	3.0	3.0	3.0
History	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0
Music	3.3	3.4	3.2	3.3	3.4	3.1	3.1	3.2	3.0
Home economics	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.1
Art	3.7	3.6	3.7	3.7	3.6	3.7	3.5	3.5	3.6
Technology	3.5	3.5	3.6	3.5	3.5	3.6	3.6	3.6	3.6
Health education	3.4	3.3	3.9	3.5	3.5	3.6	3.7	3.6	3.8
Careers education	–	–	–	–	–	–	3.8	3.7	3.9
Drama	3.9	3.8	4.1	4.0	4.0	4.1	3.9	3.9	3.9
IT	4.0	3.9	4.2	4.1	4.1	4.1	4.1	4.0	4.2
PE	4.1	4.0	4.2	4.1	4.0	4.2	4.1	4.0	4.2
Overall Mean	*3.2*	*3.2*	*3.3*	*3.2*	*3.3*	*3.2*	*3.3*	*3.3*	*3.2*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

As can be seen from Table 2.8, the subjects clustered into three distinct groups. Those perceived by pupils to be slightly over-represented, at the top of the table, were English, maths and French, then RE and Irish. The middle group, for which the time allocation was considered appropriate, contained geography, history and science. Thirdly, at the bottom of the table, were those subjects, predominately practically based, which respondents felt were allotted too little time: particularly PE and IT, and also the arts, home economics, health education, technology and, in Year 10, careers education. Pupil opinion was strongest regarding these under-represented subjects, with the most striking results of all recorded for PE and IT. A later chapter in this report will show that the subjects which respondents felt were under-represented were those that they most enjoyed. In addition, Chapter 5 will relay that pupils regarded IT, PE, careers education and also home economics as highly relevant to their current, future, and (in the case of IT and careers education) vocational needs.

There was very little change in respondents' views over the course of the Key Stage. That pupils were so constant is perhaps indicative of the strength of their opinion on the balance of the curriculum. It also suggests that throughout Key Stage 3, only allocations for geography, history and science were in close alignment with learners' opinions of the appropriate requisite time. The only noticeable changes in perception that did emerge pertained to:

- science, provision of which was considered slightly too little in Year 8 and slightly too much in Year 10 (possibly reflecting the preparation for the Key Stage 3 tests); and

- art and music – although consistently oriented towards the 'not enough' end of the scale, in Year 10 respondents were less forceful in their view that both had been under-represented.

The slight decline for art and music, in terms of less forceful views on 'not enough' in Year 10 compared with previous years, was not evident for other practical subjects (technology, home economics, IT, PE). This variation among practical subjects could perhaps be explained by a trend evident in the case-study data. In their interviews, pupils offered the reasons why they felt subjects were over- or under-represented on the timetable. It will be shown later that simple enjoyment of the subject, a regularly cited justification in Years 8 and 9, was mentioned much less frequently in Year 10, when they select their options for GCSE courses. Conversely, explanations that highlighted the relevance of the subject rose as the Key Stage progressed. Chapter 7 will relay that art and music (though less so), like other practical subjects, were considered enjoyable by survey respondents, but Chapter 5 will show that neither was deemed to have much relevance, whereas the other practical subjects were believed to be useful either vocationally or for current or future needs. Consequently, in Year 10, when pupils were driven more by the perceived relevance of a subject, music and art were deemed enjoyable (art, especially), but relatively useless and, therefore, less seriously under-represented. Drama, another practical subject considered fun but irrelevant, perhaps confirms this theory: in Year 10, grammar school pupils, manifestly more utilitarian in their views, did declare this subject under-represented but much less forcefully than they had earlier in the Key Stage.

Interim reports (Harland *et al.*, 1999b) and earlier sections in this chapter discussed the amounts of time the survey sample schools assigned to the different subjects in the curriculum and compared these with an advisory paper (NICC, 1991) which suggested minimum allocations for each subject. How pupils' appraisals of the

balance of the curriculum match these official recommendations, as well as schools' own planning, is interesting to consider.

- Among the subjects which pupils deemed over-represented (see Table 2.8), were three (i.e. maths, English and languages) of the four curriculum areas that the NICC advisory paper recommended should each take a minimum of ten per cent of the time available. However, there is a significant school factor here, because in the survey schools, these subject areas and RE (also deemed 'too much') received on average markedly more time than the minimum recommendations (Harland *et al.*, 1999b).

- History and geography were also allotted more time by the schools than the NICC suggested, though largely pupils found this appropriate.

- PE, despite occupying a greater proportion of survey schools' timetable than NICC recommended, was still perceived as severely under-represented by pupils.

- All of the subjects to which schools allocated the lowest percentage of curriculum time were regarded by pupils as insufficiently covered.

This analysis may suggest that a balanced curriculum from the pupils' perspective would assign time to English, maths and languages more in line with the NICC minimum recommendations than schools' current allocation; maintain history and geography at levels offered by schools (that is higher than the NICC suggested); raise PE beyond schools' provision and particularly the NICC recommendations; and afford more time to creative and expressive subjects, practically oriented subjects and the cross-curricular themes.

It should be noted that although respondents favoured increased provision for practical subjects — and this is perhaps unsurprising when these were the subjects they enjoyed most but which received least time — there was no suggestion that pupils wanted to turn the curriculum completely upside down: their ratings for subjects considered over-represented were not as extreme as those for subjects deemed insufficiently covered. This may indicate that even a modest decrease in the allocation for English, maths and languages — those subjects currently allotted most time — might satisfy pupils.

In order to understand better pupils' perspective on the balance of the curriculum they experienced, the results were crosstabulated by a number of variables to ascertain whether school or pupil type appeared to influence their views. What follows is an analysis of the findings broken down by the type of school pupils attended, their gender and their level of engagement: for each, some illuminating trends emerged.

Grammar and secondary school pupils' perceptions of balance

A disaggregation of the results by the type of school (shown in Table 2.8) revealed that grammar school pupils registered greater concern about the balance of their curriculum. Relative to their secondary counterparts, they felt that too much time was spent on some academic subjects: amongst others, maths (for which there was a slight but consistent difference in the ratings of the two school types) and particularly languages: in Years 9 and 10, grammar school pupils were markedly more inclined to think that they did too much Irish, and their feeling that French was over-represented grew more acute as the Key Stage progressed. This might reflect the higher degree of difficulty which grammar school pupils associated

with languages; equally, it may be a direct result of the larger quantities of time that the sample grammar schools were found to dedicate to languages.

A point of interest may be that in Year 10, grammar school pupils were slightly more likely than their secondary peers to consider that too much time had been spent on English, maths and science, the subjects formally tested at the end of the Key Stage. For science and English, this was the first time grammar school pupils had registered stronger views on the over-representation of these subjects. This perhaps indicates that greater emphasis was placed on the Key Stage 3 assessments in grammar schools. Indeed, this would corroborate the findings reported in Chapter 4, which establishes that substantially more grammar than secondary school pupils felt that the tests had affected their school life in Year 10, and that the preparation for the assessments was more intensive in these schools.

As well as expressing stronger views on the over-exposure of some academic subjects, grammar school pupils also registered greater concern about areas of the curriculum deemed under-represented. They were more inclined than their contemporaries in secondary schools to feel that insufficient time was afforded to the cross-curricular themes and all (but one) practical subjects. This was particularly the case for PE and IT, and drama in Year 8 and careers education in Year 10. Music, interestingly, was the only practical subject that secondary school pupils were more inclined to feel was under-represented.

It may be noteworthy that although grammar school pupils expressed more concern over the under-representation of practical subjects throughout the Key Stage, this trend was strongest in Year 8 (both in terms of the number of the subjects where there were differences in the grammar and secondary means and the margin between these scores). This was the opposite of the trend for over-represented subjects: here, it was in Year 10 when there was greatest disparity between the views of grammar and secondary school pupils. Analyses of the timetables showed no substantive change in the amount of time grammar schools dedicated to their subjects in Years 9 and 10, so both these trends might be attributed more to the pattern, highlighted above and to be described in detail later, whereby pupils overall, but grammar school pupils in particular, became more utilitarian as the Key Stage progressed in determining which subjects were under- or over-represented.

The interviews with pupils in the case-study schools corroborated the findings from the survey data – namely, that grammar school pupils harboured greater concerns about the balance of the curriculum in their schools.

- Half of the interviewees in the case-study grammar schools identified an aspect of the curriculum that they felt was under-represented in every single year of Key Stage 3, compared with less than one-third of secondary school pupils.

- More grammar than secondary interviewees expressed the view that they had done too much of a subject/topic (particularly in Years 9 and 10, when the survey findings also suggested that grammar school pupils' feeling about the over-representation of subjects was strengthening).

In any analysis of results which reveal differences in the perceptions of grammar and secondary school pupils, it is always possible that the difference perceived is due not to the type of school they attend but to pupils' level of ability, with the selective system directing most (though not all) high-attaining pupils to grammar

schools. However, the evidence indicated that it was the type of school that was the determining factor. When the results were disaggregated by pupils' level of attainment, the patterns that were evident when the data were broken down by type of school did not emerge so strongly, especially in terms of the over-representation of languages and maths. Had attainment been key, these trends would have been more engrained.

Boys' and girls' perceptions of balance

The breakdown of the results by pupils' gender revealed something of the different priorities of the sexes in terms of balance in the curriculum. Particularly with regard to subjects deemed under-represented, girls and boys were more inclined to perceive a lack of provision in subjects stereotypically favoured by their gender. For example, compared with girls, boys were consistently more likely to feel they did too little technology and PE. Relative to their male counterparts, female respondents felt insufficient time was allocated to music and home economics throughout Key Stage 3, and careers education in Year 10. As the Key Stage advanced, this trend became more entrenched: for example, boys were even more convinced that they did too little technology and PE in Year 9 than they had been in Year 8; and, whereas girls had been only marginally more likely than boys to feel that art and health education were under-represented in Years 8 and 9, in Year 10 they expressed markedly stronger views about the lack of provision for these subjects.

Pupils' gender also appeared to influence the subjects they considered over-represented in the curriculum. In each year of inquiry, male respondents were notably more inclined than their female counterparts to feel that too much time was spent on French. They were slightly, but consistently, more likely to consider history over-represented. As was the trend for subjects deemed under-represented, the difference in boys' and girls' perceptions here was more marked by the end of the Key Stage. Firstly, in Year 10 there was an even more notable margin between their scores for French. Additionally, boys were conspicuously more inclined than girls to feel that they had done too much English and RE in Year 10, whereas previously there had been only slight differences between their scores for these subjects. Further, in Year 10, male respondents for the first time were a little more likely than their female peers to think maths was over-represented. It is interesting that with the exception of maths, the subjects which boys were inclined to consider over-represented (French, English, RE and history) often involved a considerable degree of writing. Indeed, in the case-study interviews, boys, especially those who were low-engaged and low-attaining, were much more likely than the girls to criticise the amount of writing subjects required: *'Done too much writing ... writing, writing, writing'* (male, Year 9).

Pupils' level of engagement and their perceptions of balance

The following table, Table 2.9, presents the mean scores for each subject disaggregated by degree of engagement for all three years of inquiry.

The results presented in Table 2.9 clearly show a close association between pupils' level of engagement and their concern over the balance of the curriculum, particularly regarding subjects that were over-represented. Compared with their mid-, and especially, their high-engaged peers, low-engaged pupils were consistently more inclined to feel that too much time was spent on all the 'academic' subjects in the curriculum. This was particularly the case for languages, and maths and English, the areas which respondents overall deemed most over-represented.

Table 2.9   Pupils' perceptions of the time spent on their subjects by level of engagement and year group

1 = too much; 5 = too little

(i.e. the lower the mean, the more pupils felt they received too much)

Subject	Year 8				Year 9				Year 10			
	Overall mean	Low group	Mid group	High group	Overall mean	Low group	Mid group	High group	Overall mean	Low group	Mid group	High group
French	2.7	2.5	2.7	2.8	2.6	2.3	2.6	2.9	2.6	2.3	2.6	2.8
English	2.7	2.6	2.7	2.8	2.7	2.6	2.7	2.9	2.7	2.5	2.7	2.8
Maths	2.7	2.6	2.7	2.7	2.6	2.5	2.6	2.8	2.7	2.4	2.7	2.8
RE	2.8	2.7	2.8	2.9	2.8	2.6	2.8	3.0	2.8	2.7	2.8	2.9
Irish	2.8	2.8	2.9	2.9	2.9	2.8	2.9	3.2	2.8	2.7	2.9	2.9
Science	3.1	3.0	3.1	3.1	3.0	2.8	3.0	3.2	2.9	2.7	2.9	3.1
Geography	2.9	2.8	2.9	3.0	3.0	2.8	3.0	3.1	3.0	2.9	3.1	3.1
History	3.0	2.9	2.9	3.1	2.9	2.8	2.9	3.1	3.0	2.8	3.0	3.1
Music	3.3	3.1	3.4	3.4	3.3	3.1	3.3	3.4	3.1	3.0	3.1	3.3
Home economics	3.2	3.3	3.2	3.3	3.2	3.1	3.2	3.3	3.2	3.1	3.1	3.2
Art	3.7	3.7	3.7	3.6	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.6
Technology	3.5	3.5	3.6	3.5	3.5	3.5	3.6	3.5	3.6	3.6	3.6	3.5
Health education	3.4	3.4	3.4	3.5	3.5	3.6	3.5	3.5	3.7	3.7	3.6	3.9
Careers education	–	–	–	–	–	–	–	–	3.8	3.7	3.7	3.9
Drama	3.9	4.0	3.9	3.9	4.0	4.0	4.0	4.1	3.9	3.9	3.8	3.9
IT	4.0	4.1	4.1	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.0
PE	4.1	4.2	4.1	3.9	4.1	4.2	4.1	4.0	4.1	4.1	4.1	4.0
Overall Mean	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.4	3.3	3.2	3.3	3.3

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

The trend grew stronger as Key Stage 3 progressed, with the margins between the scores of low-engaged pupils and their mid- and high-engaged counterparts widening after Year 8 (for example, in Year 10, there was a most marked difference of 0.4 between low- and high-engaged pupils' ratings for maths; whereas in Year 8, it had been 0.1). This trend was the result of low-engaged pupils becoming ever more dissatisfied with the over-representation of maths, English, science and French, which runs counter to the general pattern in the data (discussed earlier) and also in contrast to mid- and high-engaged respondents who remained constant in their appraisals throughout the Key Stage.

These findings would suggest some sort of link between pupils' level of engagement and the strength of their feeling regarding the over-representation of subjects in the curriculum. High-engaged pupils registered least concern (in fact their scores, clustered around 2.8/2.9, just edging towards the 'too much' domain); followed by mid-engaged respondents; and finally, low-engaged pupils consistently expressed most forcefully that they did too much of 'academic' subjects. However, the direction of causality is uncertain: whether pupils are disengaged and consequently feel the curriculum is unbalanced, or whether they feel the curriculum is unbalanced and are consequently disengaged.

If it were the perceived imbalance of the curriculum that is a source of youngsters' disengagement, it would appear that the over-representation of subjects is more likely to repel than under-representation. While differences in the perceptions of low-, mid- and high-engaged pupils for subjects deemed 'too much' were clearly evident, much greater consensus existed between these three sub-samples in terms of subjects considered under-represented. In fact, the greatest difference of opinion here concerned PE in Year 8, when low-engaged pupils were marginally more inclined than their mid-engaged counterparts and markedly more likely than high-engaged peers to feel that too little time was allotted to this subject. This gap closed over the Key Stage. Moreover, there were some subjects where mid- or high-engaged respondents were more inclined to consider provision insufficient (e.g. home economics in Year 9). Thus, in a disaggregation of the results by level of engagement, the most marked differences in perception emerged for over-represented subjects. This might be noteworthy given that, when the results were broken down by the other variables like pupils' gender or type of school, the greatest differences in opinion were, in general, observed for under-represented subjects (though there was some evidence that this was changing for grammar school pupils in Year 10).

The possibility of an association between pupils' level of engagement and their views on balance in the curriculum, particularly the over-representation of subjects, was further substantiated by the case-study interviews with pupils, from which the following points emerged.

- In each year, proportionately more low-engaged interviewees identified areas of the curriculum on which they felt too much time had been spent.

- Every one of the low-engaged interviewees cited a subject or topic that they felt had been over-represented in the course of Key Stage 3 – often repeatedly.

- Indeed, low-engaged learners were most consistent in their feeling that they had done too much of certain subjects. More than half the low-engaged pupils expressed displeasure in the over-representation of some aspect of the curriculum annually throughout the Key Stage, compared with one-fifth of mid-engaged and a quarter of high-engaged interviewees.

- Significantly, perhaps, it was low-engaged pupils from grammar schools who were the most likely of all to feel that they had spent too much time on an aspect of curriculum in each year of the Key Stage.

Although, as emerged in the survey data, the link between pupils' level of engagement and their views on the over-representation of subjects appeared stronger, there was also some evidence of an association with their feelings on the under-representation of subjects in the case-study data.

- In Years 9 and 10, proportionately more low-engaged pupils highlighted an area of the curriculum that they felt was under-represented.

- Low-engaged pupils were most consistent in their views that too little time had been afforded to certain subjects or topics. In particular, six of the seven low-engaged interviewees attending the two case-study grammar schools identified a topic or subject they perceived to be insufficiently covered in each year of Key Stage 3.

Thus, an association between pupils' level of engagement and their perception on balance in the curriculum, especially the over-representation of subjects, clearly emerged in both the quantitative and qualitative data. Further, there was an intimation in the case-study work that low-engaged pupils attending grammar schools felt the over- and under-representation of subjects most keenly.

Justifying their views on balance in the curriculum

In their interviews, the case-study pupils explained why they felt subjects had been over- or under-represented, allowing for an exploration of the factors that determined their views of balance in the curriculum they experienced. The reasons pupils gave are discussed below: first, their justifications of why they felt they did too much of a subject, and then their explanations of why they deemed they did too little. Although there were some common reasons why subjects were deemed over- or under-represented (e.g. '*I don't enjoy it*', '*I enjoy it*'), there were also unique explanations and trends which made separate treatment of 'too much' and 'too little' more appropriate.

Justifying 'too much'
Too many periods
One explanation why interviewees felt that they had done too much of a subject was that it was afforded too great a slice of the timetable, that there were too many periods of it. Although a very simple justification, this perhaps reveals something significant about pupils' perceptions of over-represented subjects, and may possibly intimate why the survey results suggested that 'too much' might disengage more than 'too little'. Whilst pupils did refer to certain subjects receiving too few periods in their explanations for under-represented areas, this was always teamed with an additional reason as to why provision was deemed insufficient: they enjoyed it so wanted more or it was useful so they wanted more. However, here in terms of over-represented subjects, the number of periods alone – and no other reason – was enough to aggrieve some pupils.

This reason was cited primarily in relation to maths, and also English and French, unsurprising perhaps when these were the subjects that, according to timetable analysis presented above, schools allocated most time, and which survey respondents also deemed most over-represented. Also reflecting the questionnaire data, in Year 10, reference to the number of periods of science increased:

We got maths nearly every day of the week ... you have to go in every day and have maths (female, Year 9).

Maths and English, because we done them nearly every day and we didn't get time to do other things but we just did a lot of that (female, Year 9).

The science, because there's six periods a week. I just think it's too much (male, Year 10).

Some illuminating patterns emerged in the frequency and timing of interviewees' objections here. The proportion of pupils offering the number of periods as the reason why they did too much of a subject reduced over the course of the Key Stage (from 16 individuals in Year 8 to nine in Year 10). Furthermore, almost all such condemnation of a subject's allocated time was made by pupils in their December interviews near the start of the school year; very rarely was this criticism raised in March interviews. This would strongly suggest that pupils grow acclimatised to their timetable, both over the course of a year, and over the Key Stage. Indeed, one pupil who felt she had too many periods of French in December verified in her March interview how '*you get used to it*' (female, Year 8).

The above trends mean that in the case-study data, more interviewees expressed specific concern over the large quantities of time given to certain subjects in December Year 8 – in the initial weeks of post-primary school – than at any point later in the Key Stage. So for a number of pupils, their first reaction to their new school was that too many periods were given over to maths, English and French. It should be stated that analysis of interviewees' comments did reveal that in Year 8, other elements – often the novelties of post-primary school – were coming into play in this assessment. For example, the impact of having a French lesson every day was exacerbated by the fact it was also '*a new subject, and they just kind of spring it on you*'. As another example, the dissatisfaction with daily maths lessons was made worse for one girl because it meant she had always to carry the heavy textbook around school with her. Nevertheless, it is perhaps disconcerting that dissatisfaction with their timetable was one of the pupils' first responses to their new school. What impact does this have on their school career? It may be telling that it was always low- and mid-engaged interviewees, and very rarely their high-engaged counterparts, who specifically cited the number of periods as the reason why they felt they did too much of a subject.

Pupils' perceptions of breadth and balance, perhaps more than any other aspect of a curriculum, are affected by their individual school's timetabling. Hence, the impact of schools' own curriculum planning was evident in pupils' responses. For example, in Year 10, all interviewees who felt that French had too many periods came from the same grammar school where for the first time this subject had been afforded more time than the other language they learned: '*We have done too much French. Usually French is the same as German, but we only had three periods of German and I think it's seven of French*' (female, Year 10).

Too long

Here, 'too much' became 'too long'. In each year of Key Stage 3, around one-third of interviewees referred to areas under study upon which they felt they had spent too much time:

- a whole topic: '*Living things in science seemed to drag on an awful lot because it was just what we have been doing all term, and there wasn't really any change in it*' (female, Year 8); or

- part of a topic: '*In geography, we were too detailed, because we would do a double lesson on looking at a picture of a rock and then drawing it out and seeing all the different cracks*' (female, Year 9).

In Year 8, this criticism was primarily directed towards history: of the 20 pupils who felt they had spent too long on an area under study that year, nine specified the apparently interminable focus on Norman Britain. For example, in her December interview, a grammar school girl complained: '*I think we have covered the Battle of Hastings for very long ... we did it like from the third week of term onwards.*' Her class were still working on this topic the following March and her lament continued: '*I think we might have done too much of the Normans in history. We really, really have.*' This evidence may point to a particular problem with the NIC specifications for history in Year 8, and given that, in Years 9 and 10, far fewer pupils (four and three) felt they had spent too long on historical topics, it might suggest a need to review the content of the history curriculum in the first year of Key Stage 3. Geography especially, but also science, English, maths, home economics and RE, were also identified as subjects where topics had continued for too long a period.

Interestingly, whilst high-attaining pupils did highlight topics that they felt they had studied for too long, they were inclined to acknowledge that there were reasons why an area of study might require long and detailed coverage:

> *I think we did a bit too much about geography and settlement ... but it's a big topic ... you could call it the main root of geography* (male, Year 8).

> *I think in science, cells went on, or maybe it's just that there was a lot to them or I just thought that they went on for an awful long time compared with other topics that we had done* (male, Year 10).

This may explain why fewer high attainers identified topics which they felt had continued interminably in Year 10, whereas in Years 8 and 9, the proportions of high-, mid- and low-attaining pupils criticising the length of time spent on various topics were very similar.

Lack of enjoyment
Although personal enjoyment was a regularly cited reason why pupils wanted more of a particular area of the curriculum (especially in Years 8 and 9), lack of enjoyment was infrequently mentioned as a justification for desiring less (offered by five pupils in Year 8, seven pupils in Year 9 and three pupils in Year 10). This may perhaps indicate that pupils felt that their own dislike of a subject was insufficient justification to dictate the timetable. It was primarily low-engaged boys who referred to their lack of enjoyment when justifying why they felt they had done too much of a subject, including one boy whose dislike of French prompted him to feel that it was over-represented in each year of Key Stage 3: '*French, it's my worst subject*' (male, Year 8); '*Too much French. It's just boring*' (male, Year 9); '*Cut all French. I hate it*' (male, Year 10). This was a low-engaged boy – what impact did the unrelenting allocation of French have on his low level of engagement?

Lack of relevance
This reasoning was offered primarily to justify pupils' views that music, home economics and PE were over-represented (though specific topics like electric circuits in science, and rocks and soil in geography were also cited). Although, as the survey data showed, these subjects were generally considered to be under-represented, a number of interviewees did feel that because they offered little in

the way of vocational relevance, they were actually allotted too great a share of the timetable:

> *We are doing a bit too much on recorders in music, I think ... We didn't ask to do recorders, it's not as though we really need it for a job. It would be nice if they say 'Do you want to do recorders? Or you can use that subject for extra maths'* (male, Year 9).

> *Too much home economics. It's just nothing, like we do work but it's just nothing* (male, Year 10).

> *Less PE. It's not as if I'm going to be a world-class athlete or anything* (female, Year 10).

As the Key Stage progressed, pupils increasingly referred to the irrelevance of the subject to justify why they felt that it was over-represented (four pupils in Year 8, six pupils in Year 9, and 12 pupils in Year 10). This mirrors the findings of the next section, which reports that the number of pupils citing relevance to explain why they felt subjects were under-represented also rose over the course of the Key Stage. Regarding over-representation, in addition to the increase in the number of interviewees using this justification, there was also a change in the type of pupils who offered this reason. In Year 8, it had been primarily high-engaged high attainers; in Year 9, it was mainly mid-engaged, high-attaining grammar school pupils; however, in Year 10, a broader cross-section gave this explanation: mostly low- and mid-engaged pupils and pupils of all abilities, including, for the first time, low attainers. Relevance, therefore, became an increasingly important and widespread determinant of pupils' perceptions of the make-up of the curriculum as they moved towards the end of the Key Stage.

Justifying 'not enough'

Pupils' reasoning why subjects were under-represented fell into three broad categories: their personal enjoyment and interest in the subject, its relevance, and the manageability of the curriculum. An analysis of the justification which interviewees chose to expound revealed the differing perspectives of the various pupil types and a change in priorities over the course of the Key Stage.

Enjoyment

Chapter 7 will show that pupils expressed a strong preference for practical subjects, and reflecting this, personal enjoyment – *'I just like it'* – was most commonly offered to justify the desire for more PE, art, IT, technology, cooking in home economics and, to a lesser extent, drama:

> *I would like to do PE more ... and probably art ... I have an interest in them. I like to play football and sports, and I just like to draw* (male, secondary, Year 10).

> *IT, you see it's only once a week ... we have a six-day timetable, so you have to wait another six days until the next time you do it if you enjoy something* (male, secondary, Year 8).

Individual pupils who liked history, maths, French, English, music and RE also felt they did not do enough of their *'favourite subject'*.

In both Years 7 (20 pupils) and 8 (23 pupils), enjoyment was a regularly cited explanation as to why pupils deemed there had been insufficient coverage of a subject. In both years, over a third of case-study interviewees felt that a subject(s) they liked was under-represented on the timetable. By contrast, in Years 9 (13

pupils) and 10 (14 pupils), under a quarter of pupils offered this as the reason why they thought they did not do enough of a subject. This decline may reflect pupils' maturation; however, it also intimates that as the Key Stage progressed, pupils became more utilitarian in their views and increasingly regarded their enjoyment of a subject as an inadequate justification as to why more time should be spent on it.

It would appear that this perception was felt most keenly and earliest by grammar school pupils. In each year of Key Stage 3, far fewer grammar school interviewees than secondary school pupils specified their enjoyment of a subject as the reason why they felt it was under-represented, as shown below.

Table 2.10 Number of pupil interviewees giving enjoyment of a subject as a reason for perceiving it as under-represented

	Year 8	Year 9	Year 10
Grammar	6	2	3
Secondary	17	11	11

Source: *NIC Cohort Study: Years 8, 9 and 10 Case Study Interviews*

The difference in the numbers of grammar and secondary school pupils offering this explanation possibly suggests some divergence in their mindsets and experiences. Later chapters in this report will demonstrate grammar school pupils' lesser enjoyment of the curriculum, and it may be that the difference in grammar and secondary school pupils' reasoning here is indicative of a perception on the part of grammar school interviewees that enjoyment by itself is not a worthy outcome of schooling. It is perhaps important to extrapolate how far the type of school appeared to contribute towards this, or whether the other common denominator of grammar school pupils, ability level, was more of a determining factor. An analysis of pupils' comments by level of attainment revealed the high-attaining interviewees in the case-study grammar schools were less inclined than their high-attaining counterparts in the case-study secondary schools to give enjoyment as a justification. This would perhaps intimate that it was the type of school that was key. Indeed, this was further substantiated by an examination of interviewees' pre-grammar school comments on breadth and balance. Interviewed while still at primary school in Year 7, pupils destined for a grammar school education did highlight subjects they liked as those under-represented, more so in fact than those interviewees intended for secondary school. From this, it might be inferred that in their grammar school experience, enjoyment was no longer a determinant of what these pupils wished to spend more time on.

Manageability of the curriculum

Four difficulties with the manageability of the curriculum led pupils to feel they had not done enough of a subject or topic.

• Quality of learning: when they needed more time to understand or master the subject matter:

In maths, I only got one lesson of long multiplication, and I think I should have done far longer than that and more of it because I still don't understand it (female, Year 8).

In chemistry, I would have liked to look at the equations longer because I didn't really grasp them, so I would have liked to have gone over them a couple more times (female, Year 10).

- Pace of learning: when learning was too rushed:

  Spanish; I would rather we had more lessons so we could take it slower, go through it more, make sure you understand it (male, Year 10).

  In maths, because there's so much to learn, the teacher would tend to rush on a bit and if you tried to understand something, you wouldn't get to it, because she is sort of trying to get on to the next module (female, Year 9).

- Quantity of learning – overload: when there was too much to be done in the time available:

  CDT. We only get three periods a week which is around two hours every week, and there's a lot of projects and things that we have to get through and lots of things involved in them, and you end up getting very behind and not able to finish your last project (female, Year 10).

Pupils expressed these concerns in relation to a wide variety of subjects, primarily languages, science, history and maths, and less so regarding practical subjects. When a manageability issue was the reason why a pupil felt there had been insufficient time spent on a subject or topic, it was often a very individual perspective, a reflection of their own learning needs: '*Sometimes in English* [I want to do more] *because I am quite bad at English, not really good at it, and sometimes I have trouble with it, and sometimes other people go through it faster and I can't really keep up with it*' (male, Year 10). However, the impact of an institution's planning and mediation of the curriculum was also evident, because on several occasions, members of the same class raised the same concerns. For example, six interviewees in a grammar school felt they had done too little drama in Year 10 when the weekly double period of Years 8 and 9 was reduced to a single period, upsetting the quality and quantity of learning and the pace of lessons:

  I would like to have a double period of drama; they have sort of cut down on that in time. One period a week isn't really enough ... things are very, very rushed. The teacher hasn't been able to explain anything to us really. She has just had to call it out and we have had to copy it down – you get an aching hand because we write so much (female, Year 10).

  We only get a single of drama ... You don't really get anything finished. If you have to write up a play, you always need to take two or three weeks to do it because you never get enough time (female, Year 10).

Further examples related more to the curriculum as mediated. In Year 9, two classmates in a grammar school advocated that more time should be spent on topics in history because at present '*we're just going over it too quickly, not doing enough, just too fast*'.

It was stated earlier that pupil type appeared to have some bearing on their desire to spend more time on a subject or topic, and as shown above, pure enjoyment was more often given by secondary than by grammar interviewees. The manageability of the curriculum, however, emerged as a greater priority for grammar school pupils and, notably, high attainers in secondary schools, possibly intimating that pupils' level of attainment was a determining factor here (in contrast to enjoyment, where the type of school appeared key). Indeed, over the course of Key Stage 3, difficulties with the level, pace and amount of work prompted 16 high attainers to feel, often repeatedly, there had been insufficient coverage of a subject or topic, compared with only seven mid-attaining and two low-attaining

pupils. It is noteworthy that it should be the high-attaining interviewees who primarily used this explanation, though this is in line with the findings reported in Chapter 6 that high attainers, particularly grammar school pupils, were most inclined to raise concerns over the manageability of the curriculum. It is perhaps most interesting that in the case-study secondary schools, institutions which embraced the full ability range, this justification was voiced more by the high-attaining interviewees, presumably the most academically able pupils in their schools, than by their mid- or low-attaining classmates.

Relevance

Pupils advocated increased provision of subjects and topics they felt had relevance for:

- their present day lives – for example, *'more reading in English ... so it can help our vocabulary'*, and, particularly in Years 8 and 9, more drugs education in pastoral or form class lessons:

  I think form, that's learning about different drugs and how to stay away from them and all, we only get that one period a week ... I would just like to be a bit more streetwise and know the different effects of different drugs and things (female, Year 9).

- life and social skills and knowledge – for example, more cooking in home economics, more debating and more oral communication:

  I don't think we do enough talking and listening in classes. I think that's quite an important thing to do because you always need the skills to be able to talk and listen and understand people. We don't do an awful lot of that in school and I think that's quite useful to do (female, Year 10).

- their future working lives – either specific to their own career plans or more generally, especially IT:

  In science, we have been doing all about wood ... and I want to be a joiner, so it would be interesting to know more different types of wood, so it would (male, Year 9).

  I suppose computers because you only get about a period, two periods a week, and for most jobs you need computers, so I think that should be extended (male, Year 10).

Pupils' desire to spend more time on subjects/topics they deemed relevant suggested a change in their priorities over the duration of Key Stage 3. It was shown above that the proportion of interviewees offering enjoyment as explanation declined with each year of the Key Stage. In contrast, the number giving relevance as justification rose (Year 8: six pupils; Year 9: nine pupils; and Year 10: 13 pupils). Moreover, there was a shift in the type of relevance that prompted pupils to feel that a subject/topic had been under-represented. In Years 8 and 9, calls for increased provision of subjects or topics because they were relevant to pupils' present-day lives or offered social or life skills outnumbered requests for more time on subjects/topics useful for their future working lives. Conversely, in Year 10, more pupils wanted greater coverage of a subject/topic because it held vocational relevance for them or would afford them better awareness of the job market – like more careers education – or the skills to access it: *'Maybe more letter writing in English. We have done some stuff in that, but it would help if you were applying for a job if you could write a good letter'* (female, Year 10).

As has been highlighted above, different pupil types gave varying reasons why they felt a subject was under-represented. It was mid-attaining pupils and primarily high attainers (but very rarely low attainers) who referred to relevance in their justification of why more time should be spent on a subject or topic.

2.5.2 Pupils' perceptions of breadth in the curriculum

To explore pupil perspectives on the breadth of the curriculum, an item was included in their annual survey which asked: '*Is there anything that you would like to have done or learnt about at school which so far has not been covered sufficiently in your lessons?*' Respondents were first invited to indicate 'Yes' or 'No', and then those who answered in the affirmative were requested to specify '*up to three skills, topics or subjects you would like to have done or learnt about*'. Pupils' perceptions of what Eisner (1979) termed the 'null curriculum' were thus sought.

Before moving on to '*the skills, topics and subjects*' suggested for additional provision, it should be noted that the proportion of pupils answering 'Yes' to the initial question increased sharply after Year 8: (Year 8: 51 per cent, Year 9: 73 per cent, Year 10: 69 per cent). The very even split in the responses in Year 8 (51 per cent answering 'Yes', 49 per cent 'No') might reflect pupils' initial enthusiasm for a curriculum which would have been broader than that which they experienced in primary school (with the inclusion of modern foreign languages, for example). However, perhaps as the novelty of post-primary school education waned, these data would suggest that the vast majority of pupils considered the constituents of the Years 9 and 10 curricula lacking in some way. The pattern in the results here concurs with findings reported in Chapters 4 and 7 that in Year 9, pupils' estimation of the curriculum declined, to recover slightly in Year 10.

When pupils specified the skills, topics and subjects which they wanted to do or learn, there was great diversity in responses, and the most common suggestions are set out in rank order in Table 2.11.

A number of illuminating findings and trends are contained within this table.

- In each year of Key Stage 3, PE, IT, languages, drama and PSE-related topics (including sex, drugs and health education, first aid, life skills, child care) dominated the top of the table. These were the aspects of the curriculum most frequently nominated for a greater presence. It is perhaps telling that three of these five areas (IT, drama and PSE) do not have single-subject status within the NIC.

- The inclusion of languages near the top of the rank ordering may appear surprising given that in the semantic differential item, provision of these subjects (especially French) was considered 'too much' (see 2.5.1). However, for the most part, the pupils specifying languages here wished not for more of the language they were already studying, but for the opportunity to learn a new language not offered to them by their school (e.g. Irish and Spanish were popular nominations).

- The data reveal three changes in pupils' priorities over the Key Stage. Firstly, and most strikingly, the desire for PSE-related work increased markedly, suggested by around one-sixth of pupils in Years 8 and 9, but by a quarter in Year 10. A leap in the proportion of respondents nominating sex education (from five per cent in Year 8 to ten per cent in Year 10) in particular accounted for this rise. Secondly, the appeal for additional IT also grew, especially

between Years 8 and 9, mirroring pupils' growing awareness of its vocational relevance (see Chapters 5 and 8). Thirdly, in Year 10, there was a sharp incline in the proportion of pupils citing careers education, and also business studies. This surge for careers education most likely reflects pupils' focus on their future working lives as they selected their Key Stage 4 options, though it may also stem from their having experienced careers education for the first time during that year. The Pilot Report found that pupils were more likely to nominate a subject for increased provision when they had had some actual experience of it to stimulate their interest. This reasoning could also explain the rise in demand for business studies, because a number of survey-sample schools ran taster courses during Year 10 to help pupils determine whether to choose this course at Key Stage 4. Further explanation was provided by the case-study data. Interviewees who had opted for subjects, like business studies, which were not part of the Key Stage 3 curriculum commented how '*good*' it would be to '*get some practice in*' before the serious work of GCSE/GNVQ began.

Table 2.11 **The most common suggestions of curriculum areas for which pupils would like additional provision**
(Percentages are based on the number of pupils answering 'yes' to the initial question 'Is there anything that you would like to have done or learnt which so far has not been sufficiently covered?'.)

Suggested subjects or topics	Year 8 Percentage of pupils answering 'yes'	Year 9 Percentage of pupils answering 'yes'	Year 10 Percentage of pupils answering 'yes'
PE/sports/games	35	33	31
IT	21	28	27
Languages	21	18	17
Drama	17	18	19
PSE topics	15	18	25
Home economics, baking and cooking	12	12	9
History and topics	12	13	12
Art and topics	11	10	9
Science and topics	11	10	7
Technology and design and topics	10	9	9
Music topics and instruments	8	6	6
English and topics	7	5	7
Maths and topics	6	5	3
Geography and topics	5	4	4
Trips and going out	3	3	2
RE and topics	3	2	2
Business studies	1.2	1.9	5
Careers education	0.5	0.7	7
N =	*1,350*	*1,835*	*1,780*

Pupils could list more than one topic, so percentages do not sum to 100 per cent

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

- While pupils' increasing demand for additional PSE, IT, careers education and business studies was a reflection of their changing needs and interests as they matured, another common feature was that none of these has separate status within the Key Stage 3 NIC. Consequently, pupils have no or very limited experience of these areas. By contrast, although it was subtle, the percentage of pupils nominating those subjects already established in the NIC actually declined over the course of the Key Stage (all except history and English, which largely remain constant). Does this in any way suggest a sense of attrition with the NIC by Year 10, with pupils having studied the same subjects in largely the same proportions for three years?

- For clarity, in Table 2.11, the percentages of respondents wanting more subject time (e.g. more English lessons) and more subject-related topics (e.g. grammar) have been conflated under generic categories (English and topics). Once separated, an important distinction emerged. For PE, art, music, technology and home economics – significantly those subjects which, as shown earlier, pupils felt were under-represented on their timetables – calls for more lesson time and more on specific topics (like baking in home economics, playing instruments in music) were roughly even. However, for 'academic' subjects – maths, English, science, history and geography – the vast majority of respondents appealed for particular topics to be addressed, and very few for increased lesson time of the subjects *per se*. This was particularly the case for history, which, as Table 2.11 shows, occupies a high position in the rank ordering, with almost all these pupils suggesting additional topics for study, especially recent history like the Cold War, and, particularly in Year 10, the NI 'Troubles'. Similarly, for science and biology, the human body, animals and wildlife, earth and space, and medicine were cited much more regularly than calls for more lesson time for these subjects. That pupils so readily specified topics they would like to study for history and science is perhaps indicative of their level of interest in these subjects, and also suggests that the current specifications for the NIC may not sufficiently tap their interests.

To explore further pupils' perceptions of the breadth of the curriculum they experienced, the data were broken down by pupil and school type. This analysis revealed the following points.

- In each year of Key Stage 3, notably more grammar school pupils than secondary school respondents answered in the affirmative to the initial question on whether there were any insufficiently covered aspects in their learning (especially so, in Year 10 when there was a 17 per cent difference between pupils from the two school types). This may suggest that the planning and mediation of the NIC in grammar schools were less well aligned with their pupils' views of their needs than those in secondary schools.

- The analysis of the timetables presented earlier indicated that many of the grammar schools devoted less time to practically oriented subjects than the secondary schools in the sample. Throughout the Key Stage, proportionately more grammar than secondary school respondents specified IT in particular and also PE, home economics, drama and PSE as aspects they would like to study more. Markedly more secondary school pupils desired greater languages provision – they were twice as likely to give this response as their grammar school peers – also mirroring the lesser coverage of this subject area in the curriculum they experienced.

- Throughout the Key Stage, girls were conspicuously more likely to nominate languages and drama as subjects they wished to study more; whilst boys were notably more inclined to specify IT, PE and technology. For this latter subject, the difference between boys' and girls' scores grew larger with each year, to 13 per cent in Year 10. As well as these stereotypically male subjects, proportionally more boys than girls expressed a desire for more home economics. This can be explained by the fact that pupils in single-sex boys' schools were consistently and overwhelmingly most likely to nominate this subject, no doubt because it was seldom studied at their schools. The timetable analysis for the all boys' schools (for which data were available) showed that only one included home economics in their Key Stage 3 curriculum.

- There was a noteworthy change in girls' and boys' desire for more PSE-related work through the Key Stage. In Years 8 and 9, there were very little differences in the percentage of boys and girls wanting increased provision of this area; yet in Year 10, it was nominated by a much higher proportion of girls (35 per cent) than boys (15 per cent). Analysis of the results for the various PSE topics revealed an interesting inter-school difference. In Year 9, pupils in single-sex boys' schools were most likely to want more sex education, whereas in Year 10, it was pupils in single-sex girls' schools. Both years' pupils from mixed schools were least inclined to call for more sex education.

The accounts of the case-study pupils corroborated the questionnaire data. PE (that is specific sports like '*basketball*', '*rounders*', '*camogie*', '*girls' football*' and '*rugby*'), IT and drama were most often identified as the areas which pupils would like to study but which had yet to be covered. Other practical activities like '*dissection*', '*more experiments in science*' and '*clay work in art*' were also highlighted. Much has been said of the possible relationship between pupils' level of engagement and their perceptions of the balance of the curriculum, especially the over-representation of subjects. There was intimation in the case-study data here, however, how demoralising a complete and continual lack of provision could be: the frustration of one low-attaining, low-engaged boy who annually expressed the wish to do metalwork in technology was apparent in Year 9: '*They still don't do it this year!*'

Interestingly, relatively few case-study pupils were able to suggest areas which so far they had not done at all but which they would like to study: a quarter of interviewees in Years 8 and 9, and an eighth in Year 10. Obviously, this might reflect the fact that they genuinely felt that the current curriculum met their needs and desires; the questionnaire data above would not corroborate this, however. It could therefore mirror the finding of the Pilot Report that pupils were more likely to nominate a subject for increased provision when they had had some experience of it to stimulate their interest. Indeed, there was some evidence of this: two interviewees from one secondary school called for drama for the first time in Year 10, having '*really enjoyed it*' in Year 9. In addition, however, there was some suggestion that pupils occupied a purely receptive role in relation to the curriculum that made it difficult for them to propose new areas to include.

- Two low-attaining boys conveyed pupils' lack of choice in following the curriculum, and implied that their being asked to suggest what they could learn at school was the antithesis of this accepted truth: '... *you just do what the teacher says, like*' (male, Year 10); '*You just do what the teacher gives you, like. You can't say "No, I don't want to do it". You have to do it*' (male, Year 10).

● Two interviewees highlighted pupils' limited knowledge of the constituents of the curriculum they followed, and felt unable to suggest new aspects to include when they did not know which areas of work were forthcoming: *'Not really, because we don't really know what the teacher is going to give us, like'* (male, Year 8); *'I don't really know, because you don't really know if you're going to do it, like, a month later'* (female, Year 8).

The comments above suggest pupils' lack of participation, ownership and awareness in relation to the curriculum. And whilst this might always be a pupil's lot, it might be worth considering whether this is desirable or whether pupils could be given some say in its make-up. As suggested above (see 2.5.1), taking account of pupils' views would not spark a complete rewrite of the NIC, but might prevent the disengagement seen in youngsters harbouring the strongest views about the imbalance of the curriculum. This response from a high-engaged girl in one of the case-study secondary schools might then become the norm rather than the exception:

Interviewer: *Is there anything that you haven't done at all that you would like to have done or should have done?*

Interviewee: *No. If we want to do anything else, we ask. If they can, they get it done. If they can't get it done, they will see if they could get somebody in from outside school to do it ... Like singing, there wasn't a singing teacher in this school, but they actually got one in. There's a whole lot of girls wanted to play camogie ... and they started that up. And the same with Gaelic, they started it up for girls too* (female, Year 10).

In summing up this section on the 'curriculum as experienced', there are two final points to make.

Firstly, the case-study data have shown the various justifications behind interviewees' desire for greater or lesser provision of subjects or topics, for example enjoyment, manageability and relevance. That different pupils held different priorities perhaps highlights the difficulty of achieving a broad and balanced curriculum to suit all. However, the findings suggest that the establishment of a curriculum with acceptable breadth and balance is paramount, not only to ensure that youngsters receive a rich and varied diet, but also because of a possible domino effect on pupils' attitudes towards other key curriculum issues. There is, for example, the apparent association between their views on balance in the curriculum and their degree of engagement, though causal direction is not implied. Additionally, given that pupils referred to enjoyment, manageability and relevance as reasons why they felt subjects were over- or under-represented, there may be some intimation that the balance of the curriculum has an impact upon their perceptions of these fundamental issues.

Secondly, in addition to different pupils holding different priorities, there was also evidence that different age groups had different priorities and that this should be reflected in the specifications of the Key Stage 3 phase of the NIC. The above discussion on the 'null curriculum' has shown that by Year 10, mirroring their time of life and their stage in their school career, more pupils expressed a desire for PSE (especially sex education), careers education and business studies than earlier in the Key Stage. Equally, the topics they wished to learn about were indicative of their maturity, for example the NI 'Troubles'. Pupils' appreciation of *'more mature'* work in Year 10 also emerged in the case-study data: for example,

debating the issues around abortion in RE gave one low-engaged, high-attaining grammar school girl a rare moment of enjoyment in Year 10:

> *I am actually really enjoying what we are doing in RE because we are dealing with more mature things. The start of the year was really boring [a project on the local church] because it was all like 'We do this in first year', but now we are doing about things that do affect us. ... People do have opinions on abortion and it's good to be able to discuss them* (female, Year 10).

2.6 Curriculum as internalised

What is the impact of a perceived lack of breadth and balance on pupils' learning? While not asked directly, in the course of their discussions pupils spontaneously highlighted the impediments of 'too much' and 'too little'.

2.6.1 The impact on the learner of too much time

An association between pupils' level of engagement and their views on the balance of the curriculum, especially the over-representation of subjects, was established earlier. It was evident from pupils' articulation the sense of dissatisfaction which spending too much time on a subject or topic produced. Over-representation made the subject or topic '*boring*':

> *We have been doing Thomas à Becket for ages and it's getting really boring* (female, Year 8).

> *In music we would spend a lot of time on the composers of different music. ... We do it for about four weeks and it gets a bit boring if we have to listen to it in every class* (female, Year 10).

> *I think we have done too much science. We had five periods of that a week, and once you know you have it, it sort of gets a bit boring* (male, Year 9).

Note that it was not that the subject or topic was considered inherently boring, but rather that over-representation had rendered them thus. Indeed, too long spent on topics which were enjoyable was still unpalatable: '*I like doing the poems, it's just too much*' (male, Year 9). Such over-exposure prompted interviewees to feel '*well annoyed*', '*fed up*', '*drives me round the bend*'. And, their discourse seemed to embody the monotony they felt at spending too long on a subject or topic: '*You're just sitting in class doing maths, maths, maths*' (male, Year 8); '*She kept on making us read and read and read. It was very boring*' (male, Year 9); '*All subjects could have made things a bit shorter. They just keep going on and on and on*' (female, Year 9).

Given the detrimental effect of over-representation on interviewees' enthusiasm for the topic or study in question, it is interesting perhaps that only one teacher raised this in their interview: a grammar school geography teacher acknowledged how '*very tedious*' it was for the pupils (and herself) to be '*bogged down in an eight to ten week scheme of work*', whereas '*... constantly moving on stimulates the interest of the children more*' (geography teacher, Year 8). A pupil confirmed that instead of '*just continuing on*' with a topic, '*you want a bit more excitement in a subject*' (male, Year 9).

Considering the apparent association between perceptions of breadth and balance and engagement, it is perhaps significant that boredom should be the principal outcome of over-representation. That is not to say, however, that pupils who declared over-exposure boring were generally disengaged from the curriculum. Indeed, pupils of all levels of engagement (and also all abilities) described the impact of too much as thus. Nevertheless, at the very least, this boredom implies dissatisfaction with the particular subject or topic in question, which is likely to have contributed to the disaffection of pupils who registered the lowest levels of engagement.

A number of pupils went further than citing boredom as the outcome of over-exposure. Too much of a subject or topic had a detrimental effect on pupils' will to work: a mid-engaged secondary school girl, having identified drugs in PSE as over-represented, continued: '... *sometimes we don't do our homework because we have done too much of it and you get fed up with it, and that's why some people don't do their homework.*' Worse still was the case of a low-engaged grammar school girl:

> *I think we might have done too much of the Normans in history. ... It's all right for the first couple of weeks, but soon you don't care. It doesn't matter any more, and you just end up not bothering or trying or anything* (female, Year 8).

Her similarly low-engaged classmate also conveyed the tedium of the repetitive nature of the school timetable:

> *It annoys you whenever you have to keep going to the same class every day, every Tuesday, you get bored of it ... You know where you have to go every week and it's just so boring ... I don't know if they can make it interesting because you can't keep changing the timetable. It's always going to be like this* (male, Year 10).

2.6.2 The impact on the learner of too little time

Whereas pupils' reaction to experiencing too much of a subject focused on their dissatisfaction with this – 'too much' was boring – their response to receiving too little was centred around their consequent lack of learning. Earlier sections of this chapter have relayed how pupils could deem a subject or topic under-represented when the manageability of the work was impaired. In addition, interviewees described how their learning was impeded by spending only one or two periods a week on a subject, limiting their learning in those subjects which already received the least time. Pupils reflected that there was little they learnt or achieved because of the short space of time allocated to certain subjects. For example, in art, there was insufficient time to '*learn how to draw properly*' (female, Year 8); in swimming in PE, '... *we are never in the pool long enough really to get a proper lesson*' (male, Year 8); and in drama, a weekly single period was inadequate '*if you are going to make anything of it*' (female, Year 10). Further, it was acknowledged that with only one or two lessons a week, work or skills were forgotten due to the time lapse between periods. This was specified particularly in relation to IT:

> *We don't get much IT. We only get one period a week ... I'd like three or four a week, because you sometimes forget how to work a computer, how to do things like that. If they tell you something about the computer last week, you will have probably forgotten it the next week* (male, Year 9).

Additionally, the nature of practical subjects, those habitually receiving the smallest time allocations, was ill-suited to this limited provision which exacerbated the lack of learning. The rigmarole of setting out and packing away ate into the time available and further limited the amount which could be accomplished or learnt: one boy regretted the lack of '*proper*' work done during a technology lesson on an observed day in Year 8 '*... because by the time you had got all the paints and equipment out, it was time to pack up again*'. Learning was further inhibited due to the length of time it took to complete products because of demands on equipment and the need for all pupils to have experience of the same processes. A secondary school girl recalled that when each member of the class was required to use '*the machines*', '*practical work took forever*', meaning that '*we haven't really got anything done, took nothing home*'.

A recurring theme of this chapter has been the association between the perceived imbalance of the curriculum and pupils' degree of engagement. Within this, the survey data and interviewees' accounts suggested that over-representation was a bitterer pill than under-representation (despite the strength of scores on the 'not enough' side of the scale; see Table 2.8). Although this was evidently the case – take, for example, pupils' appraisals of the impact of 'too much': '*boring*', '*get fed up*', '*stop trying*' – there was still some suggestion that 'too little' also wrought a sense of disillusion. Later chapters will document the appeal of achievement and mastery for pupils, yet here interviewees chiefly identified the lack of learning as the outcome of under-representation. Therefore, it might be supposed that they would be dissatisfied when the time allocation for a subject prevented them from learning '*properly*'. Indeed, the allure of learning was apparent as several pupils advocated greater coverage of under-represented subjects so that '*we could learn far more*' (female, Year 9). Significantly, it was low-engaged but high-attaining pupils who expressed the most irritation and disappointment when their learning was stunted, because subjects were allotted only a small proportion of the timetable:

> *I think we should do more RE in a week. There's only two periods a week and you don't really get into it enough, because it's one period of RE, then you go on about two or three days before you get your next period of RE, so it's very frustrating* (female, Year 9).

> *CDT, we are not getting enough of that ... because every time that you leave the CDT room, you feel that you wanted to do more* (male, Year 9).

Further, as pupils' articulation for 'too much' encapsulated the drudgery and monotony they felt at '*going on and on and on*' with the same subjects or topics, interviewees here were enlivened and their discourse conveyed their enthusiasm at the thought of increased provision for subjects they deemed under-represented: '*If we could get more of technology, it would be brilliant! We only get two periods a week*' (male, Year 10).

In summing up the impact of the breadth and balance of the curriculum on pupils' internalisation, it should be acknowledged again that although an association with their level of engagement has continually emerged in the data, the direction of causality here is uncertain – whether pupils are disengaged and consequently feel the curriculum is unbalanced, or whether they feel the curriculum is unbalanced and are consequently disengaged. Equally, the balance of the curriculum could be just one of many factors which influence pupils' level of engagement. Chapter 7, for example, will show the importance of enjoyment.

2.7   Summary

At the outset of the chapter, we noted that a broad, balanced and common curricular entitlement was widely accepted to be one of the prime justifications for the introduction of the NIC. However, evidence on the time allocated by the 51 schools to different subject areas established that whilst schools may work to a common framework (curriculum as specified), at the level of implementation (curriculum as planned) the NIC did not exist as a single entity. In reality, schools offered pupils a variety of NI curricula rather than a common NI curricular entitlement. Overall, languages were prone to the greatest variation, but music, technology, RE, PE and art were each allocated widely varying amounts of time depending on the school.

Further analyses of the Year 10 data revealed six main types of curricula, which were closely allied to particular types of school. For the most part, these different types of curricula were provided by schools which pupils attended largely according to their religious orientation and performance in the Transfer Test (for English, maths and science) rather than on the basis of their needs, interests and aptitudes in the particular type of curriculum they will experience.

Only four per cent of schools were meeting the minimum percentage time allocations suggested by NICC (1991) in all subjects. Music, art, PE/games and technology were the subjects most likely to receive less than the recommended times. Overall, viewed from a comparative perspective, few schools could be said to be providing a broad and balanced curriculum. Nevertheless, most teachers generally approved of the overall breadth and balance in the NIC and their school's time allocations to different subject areas. However, a sizeable group of teachers, including several Year 7 teachers, expressed concerns about the heavy concentration on the core academic areas and the limited time available for the 'minority' subjects.

Pupils' views on the balance of the curricula were fairly consistent across all three years of Key Stage 3. Pupils in general – but grammar school pupils in particular – felt that too much time was spent on languages, maths and English, while too little time was devoted to practical subjects, particularly PE, IT, the expressive arts, home economics, health education, technology and, in Year 10, careers education. Interestingly, it was low-engaged pupils, again especially those from grammar schools, who were most likely to consider that academic subjects were over-weighted and induced boredom. Such findings fuel concerns that curricula which lack balance may be important contributors to pupil disengagement, and ultimately disaffection.

Pupils' reasons for thinking that subjects were over-represented on the curriculum often focused on the allocation of too many periods, topics lasting for too long and lack of relevance. Alternatively, the main reasons proffered for believing that several subjects received too little time were enjoyment (particularly in the early years of Key Stage 3), relevance and impairments to the manageability and quality of learning.

To explore perceptions of breadth in the curriculum as experienced, pupils were asked whether there were areas that had not been covered sufficiently. Whereas half the Year 8 pupils thought there were, in Years 9 and 10 over two-thirds believed there were (73 and 69 per cent respectively). In each year, PE, IT, languages, drama and PSE-related topics (including sex, drugs and health education, first aid, life skills, child care) dominated the list of 'under-covered' topics. Careers

education and business studies were also highlighted in Year 10. Notably, more grammar school pupils than their secondary school peers indicated that there were areas that they felt had been insufficiently covered in their learning.

Overall, pupils sought greater breadth and better balance in the Key Stage 3 curricula.

3. COHERENCE ACROSS THE CURRICULUM

3.1 Introduction

We start with some definitions. Weston *et al.* (1992) distinguish two main types of coherence: a coherent view of coverage across the whole curriculum and coherence over time. We have adopted this distinction and explore the latter version of coherence in Chapter 4 on continuity and progression. Here, we consider the former type, namely lateral coherence.

Hargreaves (1991) offers a definition of coherence that matches our current interest in lateral connections across the curriculum: '*Coherence is about the way the curriculum as a whole hangs together. When a curriculum is coherent, the various parts of the curriculum have a clear and explicit relationship with one another. The curriculum has a rationale and can be planned so that the many different parts fit together to make it a whole*' (p.33). He goes on to differentiate between content coherence and experiential coherence. The former '*is about the relationships between the knowledge and skills involved in the curriculum*' (p.33) from a curriculum design perspective, while the latter denotes '*coherence as it is experienced in the routine world of the classroom by both teachers and pupils*' (p.34).

Clearly, in the light of the aims set for this project, this study is primarily concerned with pupils' and teachers' experiential coherence. It follows Hargreaves' (1987) proposal that coherence in the curriculum can only be understood in terms of pupils' responses to what the curriculum offers. From the pupil perspective, curriculum is actively constructed rather than passively received. In particular, we explore here pupils' constructions of between- or across-subject coherence, rather than within-subject coherence, which is given more consideration in the next chapter.

Drawing on an article by Buchmann and Floden (1992), Rudduck *et al.* (1994, p.199) point to another useful delineation: coherence as the '*tidying of the rough edges of knowledge*' to minimise all incongruities, as opposed to a view of coherence that allows loose ends and ambiguities to remain in a state of creative tension.

Unlike the other curriculum design principles considered in this research (e.g. breadth, balance and relevance), coherence across the curriculum has not attracted widespread approbation as an essential or even desirable feature of an effective curriculum. In England, policies on lateral coherence have had something of a roller-coaster ride. Hargreaves (1990) has noted that the concept of coherence, having been recommended by the HMI in the early 1980s, was '*quietly dropped*' by the DES towards the end of that decade. The HMI report (DES. HMI, 1989) did not include coherence as a desirable characteristic of a well-designed curriculum. Notwithstanding this, the National Curriculum Council (NCC) was charged by the DES to build coherence into the curriculum: '*NCC will have a main responsibility for ensuring that elements of the statutory National Curriculum fit together in the whole curriculum so that the parts support each other and make*

a coherent whole' (DES, 1989, para.9.4). The NCC responded by publishing guidance on planning for the whole curriculum (NCC, 1989 and 1990), but, since then, further developments in this area are hard to find.

In NI, an attempt was made in the initial design of the NIC to group individual subjects into broader categories called 'Areas of Study'. This framework is illustrated below.

Areas of Study	
English English English Literature	**Mathematics** Mathematics
Science and Technology Science Biology Chemistry Physics Technology and Design Craft, Design and Technology Home Economics	**The Environment and Society** History Geography Local Studies Community Studies Political Studies Business Studies Road Traffic Studies
Creative and Expressive Studies Art and Design Music Drama PE Media Studies	**Language Studies** French German Italian Spanish Irish Classics

To explore pupils' experience and perceptions of coherence in the curriculum, each interview with the pupils in the case-study schools included the item: '*Again, thinking of all you have done this term, can you think of any times when what you have been doing and learning in one subject linked up with or was like something you have done in another subject?*' Probes appropriate to the first response then followed along the lines of '*What were the subjects that linked up?*' and '*How did they link up?*'. A further question was then put: '*How does it make you feel when links like these happen?*' with probes on whether it helps their learning or is perceived to be boring. The post-observation interviews with pupils contained similar questions, and additional relevant data were collected through the pupil pursuit observations and some diagrammatic tasks. The annual pupil questionnaires included two items that related to coherence across the curriculum (all these are described below).

To complement the pupil perceptions, the teacher interview schedule included items on whether the teaching of their subject made reference to other areas of the curriculum, whether they felt that pupils perceived links across the curriculum and whether coherence across the curriculum was educationally desirable. The school questionnaires invited schools to describe any cross-curricular policies.

The results from these various sources are discussed below.

3.2 Curriculum as specified

3.2.1 Pupils on coherence in the curriculum as specified

Pupils' accounts displayed hardly any awareness of the whole or even part of the curriculum as specified. The NIC as set out in the statutory orders and guidance to teachers was not evident in pupils' frames of reference. Furthermore, although some pupils constructed configurations of subjects that implicitly resembled the groupings set out in the Areas of Study framework, the concept of 'Areas of Study' as a tool for achieving some coherence in the NIC was never alluded to explicitly by any of the pupils interviewed in the study.

3.2.2 Teachers on coherence in the curriculum as specified

It is not surprising that pupils displayed no awareness of 'Areas of Study', as their teachers hardly referred to them either. The concept was noticeable by its absence in teachers' accounts of the work and curriculum covered each term. Overall, only eight of the 113 teachers interviewed mentioned Areas of Study at all and the vast majority of these references were associated with issues concerning breadth, balance and pupil choice; none referred to them in connection with coherence. None of the Year 7 teachers referred to the term. In most respects, the Areas of Study framework appeared to have a very low profile in teachers' thinking and seemed to have had minimal impact on curriculum planning and implementation in schools. Moreover, no other central policies on coherence or cross-curricular skills were mentioned by teachers.

3.3 Curriculum as planned

3.3.1 Pupils on coherence in the curriculum as planned

Pupils were not aware of any planned coherence in the courses offered by schools. Virtually the only references to the schools' organisation of cross-curricular issues occurred when, on one or two occasions, pupils wondered out loud whether teachers of different subjects had planned to be covering a similar topic at the same time or whether the similarities had cropped up purely by chance. It would seem that if teachers do coordinate some cross-curricular approaches, they do not share those plans with the pupils, nor involve them in the planning process. Only one Key Stage 3 teacher said that they tried to make such links explicit to their pupils, compared with four Key Stage 2 teachers.

3.3.2 Teachers on planning for curriculum coherence

Of the five case study schools, the three non-grammar schools were more likely than the two grammar schools to have written policies and management structures for attempting to increase coherence through cross-curricular approaches. One secondary school had set up separate working parties to develop literacy, numeracy and IT cross-curricular strategies; another held bilateral meetings between departments (e.g. science and maths) to coordinate schemes of work and had conducted an audit of IT teaching; and another had established a cross-curricular steering group.

According to the Year 10 school survey, only 23 (55 per cent) of the 42 schools that responded to this item said they had at least one policy for teaching some skills across the curriculum. Secondary schools were slightly more likely to have one than grammar schools (61 per cent of responding secondary compared with 43 per cent of responding grammar schools). The skills most frequently mentioned in cross-curricular policies were related to IT (cited by 13 of the 23 schools with any policy). In contrast, six schools referred to language or literacy across the curriculum and only one school mentioned numeracy across the curriculum. In fact, policies for PSE skills, study skills and the presentation of work were cited more frequently than literacy and numeracy.

Interestingly, there was some evidence that the existence of such policies appeared to be related to the frequency of pupils' perceptions of cross-curricular learning, at least as far as IT and PSE were concerned. Of the 34 Year 10 pupils who volunteered IT as an example of cross-curricular learning in the pupil questionnaire, 76 per cent were in schools with at least one skills-based cross-curricular policy. Similarly, of the 50 Year 10 pupils who offered PSE/tutor periods as an example, 78 per cent were in schools with at least one skills-based cross-curricular policy.

Of course, to be effective, school or departmental policies need to be mediated by individual teachers. Furthermore, it is possible that individual teachers plan and implement their own cross-curricular approaches in the absence of any overall school or departmental policies or planning. Thus, it is to the planning and mediation by the individual teacher we now turn.

3.4 Curriculum as mediated

3.4.1 Teachers on the curriculum as mediated

Although the majority of teachers considered that links across subjects did occur, most believed that they arose without specific planning or that they were not sure whether any planning was involved. Across the five case-study schools, only 20 teachers made it clear that they deliberately planned to bring in cross-curricular links to their teaching. This suggests that it is more common for teachers to allow links to occur through serendipity than to prepare for them in any planned or coordinated way.

The strategies described by the 20 'integrator teachers' are worth considering, not least because they suggest approaches that may be used to develop coherence across the curriculum. Five were Year 7 teachers who deliberately combined subjects in integrated topics, especially in such areas as history, geography and science:

> *Really, on the whole, the maths and the English or the numeracy and literacy are taught on their own, sort of thing. There is, as I said, the topic – the topics do lend themselves to ... it just depends what the topic is whether it lends itself to more English and more maths, or more geography or history, whatever. We normally tend to take a number of topics throughout the year, and have geography-based or history-based, with other strands coming off it* (Year 7 teacher).

Another Year 7 teacher in a school that used part-time specialist subject teachers emphasised the practice of coordinating topics between the different teachers.

Strategies used by Key Stage 3 teachers included:

- sending pupils to consult with teachers of other subjects when relevant topics or skills are addressed;

- writing other areas of the curriculum into their schemes of work;

- working together on drafting schemes of work;

- using resources or books with cross-curricular link references;

- deliberately introducing other areas without consulting with their teachers;

- establishing when specific skills or topics will be covered in other subjects;

- using informal conversations with other teachers to discover how they are teaching certain topics (extending this by observing one another's lessons was not mentioned);

- sequencing the teaching of a related skill or topic in relation to its coverage in other subjects:

  We have certainly reduced the amount of time we need to take to teach basic concepts, as a result of very little time spent in discussion with the science department. We have certainly been able to short circuit the length of time it takes to teach energy and control ... ... We could work from an assumed knowledge because science had covered it. We could progress much more quickly. We did the same kind of thing with Year 8 electronics (technology teacher).

- direct liaison with other teachers, particularly with IT teachers, over classroom implementation:

  ... so what I did was, I had a meeting with (IT teacher) to see what second years had done, what their level was, so that I could then, sort of, build on that. And he then built into part of their scheme, the idea of the computer art programmes and the different skills that I said I would need. So, he has put them through that (art teacher).

Without such strategies, each subject appeared to be mediated in isolation from each other – except perhaps continuities (and possibly discontinuities) that arose through serendipity; as one teacher put it: '*We all seem to run on little parallel tracks and in reality they should be crossing, but in reality it's not happening.*' The physical layout of the school and remoteness of certain departments were seen by some teachers as militating against cross-curricular cooperation. One believed that it made liaison difficult, and another that it accentuated pupils' subject-based perceptions of the curriculum. Others reported obstacles centred on '*the tunnel vision*' of some teachers; insufficient training and capability to incorporate other areas of the curriculum (particularly relevant to IT); pressures to improve subject-based examination results; and competition between subjects vying for pupils, resources and status.

Notwithstanding these difficulties, virtually all teachers felt that their teaching involved links with other subjects, even if the majority made no attempt to deliberately incorporate them into their courses. Perceptions of cross-curricular links were most frequently voiced by teachers of German, PE, home economics, technology, and, most markedly, IT. English and maths teachers followed close behind this group. Teachers of music, drama, art and science were least likely to register links with other subjects. Most interestingly, while teachers of many

subjects nominated links to science, science teachers did not seem to perceive, and perhaps even value, links with other subjects – a kind of self-contained exclusivity in science seemed to prevail. In such instances, it appeared that low-status subjects attempted to enhance their standing by claiming continuities with high-status subjects, which perhaps had fewer incentives to claim links with the lower-status subjects. The tendency for the core skills to reside in the high-status subjects is an alternative explanation, though the case of graphicacy is then an anomaly, because it would suggest that science teachers would recognise a need to relate to art. The subjects to which most others felt they related were geography, maths, history, science and English. In contrast, subjects with which few other subjects felt they linked were art, French and home economics. The type of school was not a significant factor here.

Some teachers, especially primary but rarely grammar school teachers, said that they drew pupils' attention to cross-curricular links. However, the classroom observations revealed little evidence of this practice, particularly at Key Stage 3, and as a result, pupils were generally unaware of whether or not teachers were conscious of continuities across the curriculum.

3.5 Curriculum as experienced

3.5.1 Observing the curriculum as experienced

By way of exploring coherence across the curriculum as experienced by pupils, the classroom observations conducted as part of the day-long pupil pursuits have been examined for evidence of experiential coherence. This has focused on the 28 whole days of observed lessons (and accompanying interviews) in each year of Key Stage 3 at the five case-study schools. Four main interpretative points have emerged from this analysis.

Firstly, pupils' experience of the whole curriculum was strongly compartmentalised and bounded into subject categories. In terms of lateral coherence, the overriding characteristic of all the observed days was the pronounced contrast between two types of narrative experienced by pupils. One related to their sense of the sequence of events as they moved from lesson to lesson: the story of the day. Another arose out of the internal genealogy and projected future of each subject's unfolding lessons: the story of the subject. The latter was generally a very strong narrative, while the former was almost invariably very weak, at least in terms of carrying forward skills, knowledge, issues and so on from one lesson to the next throughout the story of the day. Accordingly, pupils were very adept at making numerous role transformations as they cast off the mental and linguistic narrative of one subject to quickly engage that of another, with no expectation of having to carry anything forward from one to the next. The following example was typical.

Brief outline of pupil pursuit of Year 8 class

8.55   **Registration**   *Pupils are given* **information** *about the school newsletter, a disco, carol service and arrangements for the week. Register is taken.*

9.10   **Maths**   *Pupils work from textbook chapter on* **areas and perimeters**, *while the teacher gives individual help. Homework, marked as class, involves conversion of metres into centimetres.*

| 9.50 | PSE | *Pupils recap on a visit by the NSPCC, and class discussion focuses on the importance of not missing breakfast, being sensitive to pupils labelled 'stinkin', men doing housework, what members of their families do at home, telling an adult about child abuse or ill-health and the work of the NSPCC. Pupils are asked to design a poster for the NSPCC. Also, they are constantly reminded to look after their belongings.* |

| 10.30 | Geography | *Pupils watch a video about the weather and seasons called 'Savage Skies' on the effects of strong winds and heavy rains. They also consider how people's moods are affected by the weather.* |

| 11.30 | Art | *Pupils plan the making of 3D faces with a variety of expressions, using different 'found' materials they have brought from home.* |

| 12.10 | English | *Pupils work in groups summarising (often with visual imagery) a list of events in presentations devised in the last lesson based on a novel set in the Second World War.* |

| 1.25 | Technology | *Following a lecture on the nature of the project, pupils do some outline designs for a desk tidier.* |

| 2.00 | Science | *Having been reminded that in their last lesson they made copper sulphate carbons, pupils watch an experiment on mixing chalk with water to make a 'mixture', then move to do their own experiments on filtration, which the teacher writes up with them as an experiment.* |

| 2.40 | German | *Pupils do oral reading tests individually with the teacher or the assistant, while rest of class read books (look at the pictures) in German.* |

This day serves to illustrate the substantial number of topics pupils have to deal with in a day and the pace at which they have to switch from one to the other. Perhaps, immediately shutting out what happened in each of the previous lessons is an effective way of coping with what otherwise may be experienced as a torrent of disconnected areas of learning. Although two teachers during the day made brief passing references to other subjects (i.e. one asking the pupils if they had covered a topic in science, the other advising them to get help from their English teacher), each lesson was totally self-contained and well-insulated from anything that had happened before the period concerned. Post-observation interviews with three pupils who experienced this day confirmed that they were not aware of any continuities between the lessons.

Observers of other days noted that the main narrative in the story of the day was certainly not the content of any learning, but perhaps class mood and behaviour patterns (e.g. so that noisy and disruptive behaviour could spill over into the following lesson). For the most part, teachers concentrated on developing the internal narrative and very rarely did they draw attention to links and continuities with other subjects. Thus, overall, the pupils' experience of learning across the whole curriculum was extremely episodic, rather like watching five hours of television made up of half-hour episodes of different soaps – each with their own internal narratives and character histories, but with nothing connecting them together.

Secondly, the fragmented, disconnected and episodic experience of the whole curriculum was largely standard across the five schools, though slightly more allusions to other subjects were made by secondary school teachers than their grammar school counterparts. Such allusions were also slightly more likely in Year 8 than in Year 10, when Key Stage 3 tests and examinations seemed to strengthen still further the insulated nature of subject-bounded learning.

Thirdly, however limited and partial their perspectives may be, pupils have a greater experiential awareness of the actual continuities across subjects than their teachers. Unlike their teachers, for example, pupils knew when they had experienced similar learning tasks in different lessons throughout the same day: drawing in both art and technology, drawing posters in English and home economics, working on a computer in IT and then in English, drawing graphs in history then maths, and writing in many subjects. Occasionally, pupils also identified continuities in the content or skills being addressed in different subjects on the same day: for one girl, animals and the signs of life in science related to her project work in English later in the day; another girl saw links in two consecutive lessons:

> *In home economics, when we did about some people spending too much and then being in debt and having to cut back for a while. That sort of connected with RE, about some people being very snobby about the rich and about the poor, and about how the rich never seem to get in debt because they have so much money to just go on to. So, I think they are connected* (female, Year 9).

Several more were able to offer continuities between their experiences on the observed day and earlier work in other subjects: eco-systems in geography and science; pollution in RE and geography; and as one Year 8 pupil said: '*Science links with RE because today we are going to be watching a video on growth and development, and that's what we are doing in science. We have just finished it in science. We are just starting it in RE.*' Although it was not possible to establish for certain that teachers were unaware of the continuities being experienced by their pupils, teachers made no explicit references to these links in the observed lessons and pupils generally believed that their teachers were not conscious of them:

Interviewee: *The maths we were doing – distance, time and speed, making a wee triangle type shape, equation thing – we had done that in physics before Christmas.*

Interviewer: *Did the maths teacher refer to that connection?*

Interviewee: *No, she didn't know about it* (female, Year 9).

Fourthly, many valuable opportunities to construct creative connections and extend learning between the skills, knowledge and intelligences offered by different subjects passed by unnoticed and untapped for both teachers and learners. Several examples of unrecognised but potential connections on the same day could be chosen, but three can suffice.

- The first involved Year 8 pupils in dance, music and maths: in dance, they had to chant out numbers to the rhythms of different dance steps; in music, as part of appreciating rhythm, the pupils had '*to perform a song together without the words, just marking the rhythm with their arms, slapping their knees and patting their shoulders ... slap left slap right slap cross slap click*'; in maths, the pupils had to measure shapes such as polygons using rulers and compasses. None of the interviewed pupils volunteered the obvious

connection between dance and music; similarly, the opportunity to compare units of measurement in visual linear terms in maths with those in sound and movement in music and dance was not recognised, nor used, by teachers or pupils.

- In the second example, Year 9 chemistry and geography lessons both included expositions of the differences between data description ('*results*') and interpretations ('*conclusions*'), the former using experiments in the natural sciences on air vacuums and suction, the latter examining data in the social sciences on people's travel preferences. Thus, a potential opportunity to consider thinking skills and scientific method across the curriculum went begging.

- In another Year 8 example, the processes of studying characterisation could have been reinforced by linking a history lesson, which looked at the portrayal in different sources of Thomas à Becket, with an English lesson, which included character description in a novel. Once again, the pupils were not offered any help to develop or internalise insights from these experiences – gained in the same day, but constructed separately.

3.6 Curriculum as internalised

3.6.1 Pupils' perceptions of coherence and the whole curriculum

Questionnaire data: learning across the curriculum

Not surprisingly, given the bounded nature of the curriculum as experienced, pupils tend to see the whole curriculum and their learning within it predominantly in subject categories. As an indication of this, the pupils' vocabularies used in responses to a question asked at the start of each of the annual questionnaires (i.e. before any notion of 'subjects' had been presented) are interesting. The question was: '*Looking at all the things you have done in the first/second/third year at this school, what are the most important things you have learned?*' In each year, just under three-quarters of the pupils (Year 8: 73 per cent; Year 9: 72 per cent; Year 10: 69 per cent) offered views of their learning and the curriculum that were either solely or partly constructed in subject categories. Approximately half of the sample relied totally on subject categories, compared with about a quarter (Year 8: 25 per cent; Year 9: 24 per cent; Year 10: 28 per cent) who couched their responses purely in some form of overarching perspective. Thus, signs of any appreciable shift over the Key Stage 3 phase towards more overarching and less subject-based constructions of the whole curriculum were negligible.

There was no evidence that the use of overarching perspectives rose in line with academic attainment. For example, a slightly greater proportion of high-attaining Year 10 pupils (73 per cent) answered the question either wholly or partly in subject categories than the low-attaining group (63 per cent). Similarly, the high-attaining group (24 per cent) were marginally less likely to respond solely through overarching perspectives than their low-attaining peers (31 per cent).

It is also revealing to consider the type of overarching perspectives used by some pupils. Table 3.1 shows that in Year 8, the main overarching perspectives on learning and the curriculum were associated with references to perceived changes

in personality and self-image (e.g. '*I have become more self-confident*', '*I worry less*', '*I've learnt to have more responsibility*', '*I'm more adult*' and '*I get on better with other pupils*'). Since nominations of this category fall quite appreciably in Years 9 and 10, we might conclude that the new social and curricular demands of the first year at post-primary school seem to provide many pupils with a particularly steep learning curve in terms of developing their sense of self and others. In Year 9, the most frequently registered overarching category was internalising morals and norms about good behaviour (e.g. '*... not to smoke or take drugs*', '*I must be friends with other people*' and '*... to respect other's views*'). In Year 10, learning revision strategies and the values associated with examinations and assessment, closely aligned to the new category of selecting GCSE courses, were the most commonly used reference points for cross-curricular learning. (High-attaining pupils were more likely to use these two categories than the low-attaining group.) Overarching allusions to changes in general attitudes towards work and studying were a consistently strong category across all three years (e.g. '*I have learned that I must try/work hard*', '*... to think for myself*', '*... to be careful with my work*', '*... to listen more*').

Table 3.1   Types of overarching curricular perspectives: percentages of pupils who mentioned each category as a proportion of those who offered at least one overarching perspective, either solely or in conjunction with subject categories

	Year 8 %	Year 9 %	Year 10 %
Examination, assessment, revision	15	22	39
Attitude/motivation to work	43	42	34
Changes in personality, self-image	70	11	19
Moral messages about good behaviour	45	59	27
Overarching skills and knowledge	2	8	7
Choosing GCSE courses	–	–	15
Others	3	5	7
N=	*1,198*	*969*	*1,212*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*
The percentages do not sum to 100 per cent because respondents could give more than one answer

Most interestingly, the category that curriculum designers have assumed to be the most appropriate building blocks for coherence across the curriculum – overarching skills and knowledge – was mentioned by a comparatively small percentage of pupils (with no variation according to level of attainment). This may suggest that without explicitly helping pupils to perceive and perhaps appreciate the learning of cross-curricular skills and knowledge, the internalisation of common attitudes, norms and examination-related values may represent the more widely deployed *de facto* tools by which pupils construct some coherence across the whole curriculum. The results also raise the question as to whether curriculum designers and schools should attempt to foster coherence through setting out the desired cross-curricular attitudes, norms and values (i.e. the covert or hidden curriculum agenda), as well as overarching skills and knowledge.

Concept mapping the whole curriculum

That children can construct forms of lateral coherence – or the opposite of it – through a variety of means was well demonstrated in some diagrammatic tasks that the interviewed pupils in four of the case study-schools were asked to complete.

They also illustrate how the different modes of conceiving coherence (or the lack of it) relate closely to the ways in which pupils try to make sense of the whole curriculum, often without much explicit guidance from their teachers.

In an attempt to explore pupils' constructions of the whole curriculum with the aid of some visual support, some Year 8 and 10 pupils in the interview sub-sample were requested to complete two tasks and then discuss them with the interviewer. The two tasks were (a) to draw concept maps of the given starting-point concept: '*All that I can learn from school*'[1] and (b) to sort cards with the names of their subjects written on into no more than five groups. Since the former made no assumptions about the use of subject nomenclature to frame whole curriculum perceptions, that task was administered first. The completed maps and groupings, along with their written or verbal explanations, were then analysed in order to elicit the nature of pupils' classification systems.

From both tasks, three main types of mental maps of the whole curriculum emerged, roughly with equivalent frequencies:

♦ images of contrasting value and usefulness;

♦ common content knowledge across subjects; and

♦ images of practical and academic curricula.

Each of these is described in turn.

Images of contrasting value and usefulness

Pupils who displayed these mental maps grouped subjects or constructed frameworks of the whole curriculum based on perceptions of different subjects' relative usefulness and/or importance. One pupil, for example, divided up the curriculum into two main categories: '*subjects that will give you a good job when you grow up*' and '*subjects that are smaller*'. Others classified subjects by their different currency values: for '*jobs*', '*business requirements*', '*careers*' and '*hobbies*'. As an illustration of this classification system, a Year 8 girl grouped her subjects as follows:

French, science, home economics, IT, maths, English	*I think all will be useful in the future, and useful for most jobs.*
Music, geography, PE/games	*All will be quite useful in the future, just depending on what I want to do as a living* (she was interested in a music-related career). *But I think you need to learn them anyway.*
History, RE	*Only really useful if you want to do it for your job. It's interesting and I enjoy it, but I don't think it will help me in the future.*
Technology, art	*Make things in both. And both could be hobbies in the future.*
Pastoral	*Just a bit of fun, doesn't really teach me anything. It's a bit like a free period.*

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[1] Concept maps are hierarchical diagrams that allow the maps' author to show how concepts relate to each other through linking words and lines (Novak and Godwin, 1984; Sizmur, 1994). They can be used as research tools, as well as valuable techniques in a pupil's repertoire of study skills. Since it could not be assumed that the pupil interviewees were familiar with the technique, the interviewers had to devote a large part of the interview to explaining the basic procedures. Before being introduced to the concept in question, pupils were encouraged to draw a practice map of the concepts 'food' or 'buildings'.

Common content knowledge across subjects

This way of mapping the curriculum used commonalities between subjects: for example, pupils saw scale and coordinates in maths and geography; history and RE deal with the past; CDT and art involve drawing; and grammar in English, French and Irish. Two or three pupils constructed faculty-based maps that had a semblance of the Areas of Study framework about them.

Images of practical and academic curricula

In the third of the main classification systems, pupils split the whole curriculum into two broad dichotomous categories: '*practical*' and '*academic*'. Other polarised terms to describe a similar perception were '*active*' and '*non-active*', '*physical*' and '*theory*', and '*practical*' and '*desk work*'. A few pupils inserted a '*both*' category between them. Typically, the former contained PE, technology, art, music and home economics, while the latter included English, maths, science, modern languages and history.

One interesting feature of at least two of these ways of classifying the whole curriculum – the first and third – is that far from helping learners 'to cohere' the curriculum, in the sense of assisting them to pull together its different elements, they may encourage them to do the opposite, namely to push it apart. Thus, they may lead to curricular fission rather than fusion. Held by at least two-thirds of the pupils who completed the tasks, these two mental maps may give rise to attitudes that could have demotivating influences on learning across the curriculum. For example, seeing subjects like English, maths and science as academic and non-practical or confining art and PE to hobby status could not only hamper cross-curricular learning, but adversely affect the approaches and motivation to learning in these areas.

Questionnaire data: perceived links

Although the concept maps and the first item in the questionnaires provided interesting insights, it has to be acknowledged that their interpretative value is limited because they are based on indirect evidence (e.g. questions on the relative importance of pupil learning may not have been an appropriate trigger for eliciting valid constructs of cross-curricular thinking). Thus, in order to explore more directly pupils' perceptions of learning across subjects, each of the three annual questionnaires included the item: '*Try to think of an example when what you did or learnt in one subject linked up what you did or learnt in another subject or subjects – (a) what were the subjects that linked up? (b) please could you tell us how they linked up?*'

In each year, approximately four out of every five pupils (80 per cent) perceived at least one link. The frequencies with which the pupils nominated the leading links between subjects are displayed in Table 3.2.

These results display a number of important features:

- the consistently high frequency with which science and geography as a linked pair were nominated in each of the three years;

- the prevalence of science in the most frequently cited links (e.g. science is in the top five for Year 10, yet paradoxically, science teachers mentioned making links least);

- the increased frequencies over Key Stage 3 given to maths/science, science/home economics and science/RE;

Table 3.2   Frequency of most commonly perceived links between subjects by year group: percentages of responses (in rank order of the Year 10 results)

	Year 8 %	Year 9 %	Year 10 %
Science/geography	15	14	15
Maths/science	5	7	9
Science/home economics	3	9	8
Science/technology	10	8	5
Science/RE	2	5	5
History/RE	4	13	5
History/geography	7	6	5
Maths/physics	1	2	5
English/history	3	2	4
Technology/art	5	3	3
Maths/geography	7	2	2
Biology/home economics	0	1	2
English/RE	1	1	2
Physics/technology	<1	1	2
Chemistry/geography	<1	1	1
English/drama	2	1	1
Geography/economic awareness	0	0	1
French/Spanish	1	1	1
RE/PSE	<1	1	1
Maths/technology	1	1	1
Maths/IT	1	1	1
Home economics/RE	<1	1	<1
French/Irish	2	1	<1
English/maths	2	<1	<1
English/IT	1	<1	<1
N =	2,079	2,090	2,086

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

- the declining frequencies of science/technology and maths/geography;

- the relatively high scores for certain links in particular years – notably, history and RE in Year 9, maths and physics in Year 10, maths and geography in Year 8;

- the very limited number of references to IT;

- the paucity of references to the arts, particularly music;

- by and large pupils' perceptions of links between subjects reflected the Areas of Study framework; and

- the capacity of pupils to perceive cross-curricular links was evident when they are encouraged to focus explicitly upon them; however, without guidance and support they may tend to see these in terms of content knowledge rather than skills.

Some variations in the perceived links were related to the type of pupil responding and the different curricula they experienced. In the Year 10 data, for example, grammar school pupils were much more likely to volunteer examples of links that included separate science subjects and modern languages; and slightly more likely

to cite technology, drama and maths. On the other hand, secondary school pupils were more likely to mention links involving IT, economic awareness/business studies, English and PSE. Analyses by levels of academic attainment revealed similar patterns.

As a general rule, there was very little evidence that the existence of school cross-curricular policies made any significant difference to the frequencies with which different subjects were nominated. As reported earlier, the main exceptions to this were IT and PSE/form periods in Year 8, which were nominated more frequently in schools with relevant policies than those without them.

The responses to the second part of the questionnaire item ('*Please could you tell us how they linked up?*') were used to develop a coding frame of categories depicting different types of perceived links and similarities. All the descriptions were coded according to this frame, and the resulting frequencies are set out in Table 3.3.

Table 3.3   Types of cross-subject links perceived by pupils: percentages of pupils describing links

Types of cross-subject links	Year 8 %	Year 9 %	Year 10 %
Non-specific similar coverage	11	6	10
Literacy skills and topics	4	1	1
Numeracy skills and topics	9	8	13
Drawing/graphicacy skills and topics	13	8	8
Languages (vocabulary, grammar)	2	2	2
Similar knowledge, concepts or topic	48	67	57
Similar broad skills (e.g. ICT, self-expression)	1	1	3
Similar learning processes (e.g. role play)	6	5	3
Similar moral messages (e.g. don't smoke/drink)	1	1	1
Others	4	3	2
N=	2,012	2,063	2,048

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*
Due to rounding, the percentages may not sum to 100 per cent

Clearly, the striking finding for all three years is that commonalities in content knowledge (i.e. 'similar knowledge, concepts or topic') represents the dominant mode through which learners construct continuities between subjects. (Links embracing the subjects of science, geography and history in Year 9 were heavily associated with similarities of content knowledge.) To what extent is this due to the manner in which the curriculum is specified or the way in which it is planned and mediated? In comparison, there were significantly fewer references to skills-based perceptions of cross-subject links. In particular, the very low number of allusions to literacy skills was especially surprising given that language across the curriculum policies were one of the few areas where attempts have been made to address the need for cross-curricular coherence (English, history and RE were the main contributors). Numeracy skills attracted more nominations (particularly related to maths, science and geography in Year 8), though here it is noteworthy that as many (Years 8 and 9) pupils mentioned drawing/graphicacy skills (predominantly in maths, science, technology, geography and art). Also noticeable is the lack of references to ICT and thinking skills.

Interview data: perceived links

The questionnaire finding that the majority of pupils were able to identify continuities across the curriculum was corroborated by the interview data: across all the interviews between Year 7 and Year 10, for every occasion a pupil could not identify a link between the subjects, there were almost three occasions when pupils did. Relative to the post-primary years, Year 7 pupils were especially prolific in volunteering continuities across the curriculum, both in terms of the number of pupils offering examples and the number of examples given. Throughout the four years, girls were more likely than boys to nominate links, particularly in Years 7 and 10.

The interview data produced interesting evidence to indicate that pupils' capacity to identify commonalities in their learning across the curriculum was related to their levels of academic attainment. Furthermore, it appeared that this relationship strengthened with each year as the pupils progressed from Year 7 to Year 10. Thus, for example, in Year 10, while only one in five high-attaining pupils did not perceive any cross-curricular links in their learning, half of the pupils in the lowest of the three attainment bands did not see any such links. At Year 7, the respective ratios were one in ten compared with one in four. Although less marked, similar differences emerged when grammar school pupils were contrasted with secondary school pupils. These results may suggest that lower-attaining pupils have greater difficulties perceiving continuities in their learning across the curriculum as the work associated with most subjects becomes progressively more demanding.

Although broadly consistent with the parallel questionnaire results (see Table 3.2), the foremost subjects in the cross-curricular links mentioned in the interviews show some significant changes between Year 7 and Year 10. In the last year of primary school, it was subjects in the humanities that were cited most: English, history and art. In Year 8, the humanities were alluded to less frequently and the four principal subjects had become maths, geography, science and English. In Year 10, the shift from humanities to sciences continued apace, with science and geography receiving many more nominations than other subjects.

The following table illustrates the types of commonalities described in the most frequent links (set out in the same order as the ranking in Table 3.2). As shown below, there were copious references to different types of linkage between science and geography.

Science/geography	*We did space in geography and space in physics* (female, Year 8).
	In geography and science, we are doing about river basins, but before that we did a wee bit on the water cycle (male, Year 8).
	Sometimes geography and science, just about different things like thermometers, about the ground, the earth and things like that (male, Year 9).
	Chemistry, learning about evaporation and things like that, and then in geography, we were also doing that (female, Year 9).
	Well, geography seems to have linked up with a few things. We did water in geography, the water cycle, and then just water, and then we did that in chemistry as well (female, Year 9).
	Only in science when we were doing about the eco-system, which we had been doing in geography (male, Year 9).
	Well, pollution, with the biology and the bit in geography (male, Year 9).

Science/geography (continued)	We did about acid rain and stuff when we were doing about the elements in science and we were doing that in geography (female, Year 10). Probably geography and science, because we are doing about the rainforest, and stuff, doing about habitats and all. And in science, because biology at the moment, we are doing about habitats and things (female, Year 10). Geography and science would link up because you are doing about the rock creation and the rock cycle and things that kill the plants and things like that, and you are doing the same in geography (female, Year 10). In geography, we are doing about photosynthesis, and in science, we would sometimes do about that as well (female, Year 10). We were doing about soil types in geography, and in science, we were doing about limestones and things like that and adding them to the soil. And we were doing about minerals and rocks in them both as well. So, they joined on (female, Year 10).
Maths/science	Maybe in maths and science, doing equations like ... equal something. You do that in maths as well, $X = Y$ (male, Year 9). In maths, we do about finding out distances and speeds and times, and in science, we do that there as well – in physics we do that there too (female, Year 10). Probably in science, because we were doing a lot of graph work and stuff in science, so we were, and we done a lot in maths as well (female, Year 10). Maths and science, because we were are doing about Pythagoras's theorem, and we were talking about that in science too, about formulas and stuff (female, Year 10). Probably maths and science. Like in science where we have been doing light and how it would bounce off, say, a mirror, but in maths, we would probably have to measure the angle the light would come off (male, Year 10).
Science/ home economics	Home economics and science. Science, we learn about food groups, and in home economics, we learn about food (male, Year 9). In home economics when you are doing about the electricity, you would be doing that in science at roughly the same time, so it might be to your benefit sometimes (male, Year 9).
Science/technology	In science, we did energy ... where energy comes from and then technology, we had just about come to the end of the topic on energy (male, Year 8). Yes, the sciences, I was saying about the resistors. That's exactly what we are doing in technology, because we are making the wee Christmas card and there's a wee resistor and a circuit breaker in the back (female, Year 8). Physics and technology are pretty similar because you are looking at circuits and that (male, Year 10).
History/geography	In geography, we are doing about industries and industrial revolutions sometimes, and we done that there in history again, so we did (male, Year 10).
English/history	The history and the novel link up with the war time and then we're having a novel on them about the war and evacuees (Year 7). Well, we're doing about the famine again and the teacher reads stories about it (female, Year 7).

In order to explore whether or not pupils repeated the same linked subjects each time they were interviewed, the seven interviews from a quarter of the interview cohort were analysed longitudinally, that is, individually rather than as a year group. Including pupils from each of the five case study schools, this sub-sample was selected to include pupils of varying attainment and engagement levels, gender and school type. It was clearly established that there was much variation in the subjects selected by each pupil from interview to interview. Also, there was generally much variation in the number of links proposed in different interviews. These results support the view that pupils' responses represented genuine indications of the most personally significant cross-curricular experiences recalled by them at the end of the term in question.

3.6.2 Pupils on the value of coherence and links across the curriculum

Questionnaire data: the value of links

As a follow-up question to the item that invited pupils to describe any perceived links across subjects, each of the annual questionnaires asked pupils: *'Did these links help you with your learning?'* In each year, a solid majority affirmed that the reported links had helped their learning: Year 8: 80 per cent of those describing a link; Year 9: 77 per cent; Year 10: 83 per cent. These results were found to be consistent across all types of pupils and schools.

The most frequently cited reason for valuing cross-curricular links suggested that they helped pupils learn in more depth or more detail, develop a better understanding and aid their progress. Other benefits focused on assisting the memory by recapping information and helping with revisions or examinations. (High-attaining pupils, grammar school pupils and middle-class pupils were slightly more likely to proffer all these explanations, rather than offer unspecified positive responses.)

The fact that most pupils found cross-curricular links and continuities beneficial to their learning would seem to provide a strong argument against applying a reductionist approach to coherence whereby all overlap between subjects is minimised.

Interview data: the value of links

The interview data produced remarkably similar findings. Overall, from all the Year 7, Year 8, Year 9 and Year 10 interviews, positive responses to the same question as that put in the questionnaires outnumbered negative ones by a ratio of approximately four to one. There was, however, a slight tendency for high-attaining pupils to be more positive about cross-curricular links than low-attaining pupils. Similarly, comparisons between grammar school pupils and secondary school pupils indicated that, overall, grammar school pupils were more likely to give a higher proportion of positive references than their peers in secondary schools.

Quite definitely, the main reason given for the negative feelings associated with cross-curricular links centred on boredom, repetition, frustration, and work that was not challenging. Although those who held negative views on links were in a minority, the strength of their feelings and the degree of consensus amongst them about the underlying reason for their frustration emphasise the case for not ignoring their experiences. The other reasons for negative feelings were *'wastes time'*, *'confusing'* and the subjects lose their individual identity:

If you did the same work, that would be terrible ... because you do what you need to do in class for one subject, and if you did the same in another, well, there's so much more stuff we could learn instead of doing the same in different subjects (female, Year 10).

Except the only thing is if it's like slightly different like a table or something of the cycle, then we get a bit confused (female, Year 10, who went on to affirm that it was confusing if the teachers were not consistent).

The main reason for positive responses focused on making the second subject easier or knowing more about or how to do the second subject, often implicitly suggesting that less effort was required. Occasionally, pupils made it explicit that links '*save time in the second subject*'. The latter categories were distinct from the second most frequent reason, '*improves understanding through covering twice*'. In this category, pupils often talked about gaining a deeper or more complete understanding. Two other fairly common reasons were '*learn more generally*' and '*learning more through different perspective or pooling different ideas*'. It should be noted that if these references to enriched learning had been added to those that mentioned increased understanding – and there would be some justification for doing this – they would have outnumbered references to the most common single category, making the work easier in the second subject.

As with the questionnaire responses, the memory-oriented benefits, '*repetition helps you remember*' and '*repetition/practice leads to improvement*', were slightly less well supported. The latter response was often reserved for skills-based links, e.g. a Year 8 boy, when asked about IT links replied: '*Well, I suppose that's different because that's skills rather than learning knowledge again, so that's using your skills in another thing.*'

Other pupils referred to the benefits in self-esteem that can accrue from cross-curricular links, '*helps you feel good*' or '*increases your confidence*'. A small number felt that it stimulated greater interest or motivation in the second subject, that it increased the relevance or status of a subject and that it helped foster coherence across the curriculum. Further qualitative illumination of the interview data regarding the desirability of cross-curricular learning follows in order to provide a more in-depth depiction of the benefits and issues raised by pupils. The preponderance of quotations from girls is noteworthy.

As outlined above, the most common positive reason put forward was that links across the curriculum made it easier: '*... you know how to do a thing or what to do*' in the second subject. Typical remarks classified under this category included: '*... it's good, because you've done it before, so you know what to do*'; '*... it's far easier to do*'; and '*It's all right because once you have already done it, it will be easier. You will know how to do it*' (all from Year 8 pupils). A Year 10 girl in a secondary school explained: '*It's good because you, sort of, know more or less everything. You don't have to learn things as well, because you more or less know everything already, because you have done it before*'; and a Year 7 boy captured the essence of what may be termed the 'easy-rider's take' on the value of cross-curricular continuities: '*It makes it feel a bit easier.*'

Closely allied to this perspective was the view that cross-curricular links meant that '*not as much time was needed*' in a second subject: '*... it doesn't take as long a time ... a teacher can just fly through it, because you have already been learning most of* [it]' (female, Year 9). Similarly, a Year 9 girl in a grammar school put the

'time-saver's case' by maintaining that '... *the other teacher doesn't have to spend as much time explaining it to you, so you get more done quicker'*.

The following quotation perhaps helps to illustrate the distinction between the type of response that suggested that cross-curricular links made work easier and the second most frequent category: '*You understand more through doing it twice*':

> *Well, you feel you know it, like, it's not as hard to understand because you have done it before. And, if it was really hard and it's only the first time you have done it, it would have been easier if you had done a wee bit about it before and you might understand a bit more* (female, Year 10).

In many respects, this latter comment illustrates how, for this pupil, the articulation of the benefit of increased understanding evolved out of a typical 'easy-rider' statement. There were many other contributions that fell under the 'increased understanding' category:

> *You are getting more time for it to be taught, so if it didn't get through to you in one class then ...* (female, Year 10).

> *Because if you have done it in one class and don't really understand it, but know some bits of it, and then you do it in another class, then that teaches you all of it and then you know all about it* (female, Year 8).

> *Because if you do it over again, it helps you get it more clear* (male, Year 8).

As a slightly different version of the 'increased understanding' category were the references that implied, or as in these cases suggested, that cross-curricular linkage could provide a basis or a useful background platform for work in another subject. Examples of this 'springboard' perspective included:

> *Well, it's sort of helpful because in chemistry you would do things a lot more than you would in physics. Where you did, like, about electrons in chemistry, we did those a lot more in depth there, and in physics we sort of touched on that subject, but you needed to be able to understand it* (female, Year 10).

> *It can be useful, like a question in science might be about the angles of light, but if you do it in maths, how to work out the angles, then it's a lot easier in science* (male, Year 10).

> *Well, it is helpful because it might give you sort of the base work if you had learnt it in another subject, to go on and learn more about it in another* (female, Year 10).

Another related category that focused on enhanced learning was '*you learn more about the topic generally*'. This was intended to capture references that alluded to or implied 'greater breadth' or quantity of knowledge rather than depth as in the above categories. Examples included:

> *You can learn more about it because you are having it in two lessons* (female, Year 8).

> *It's good, so it is, because you are learning about the rocks. You were learning about one thing about them in geography, and then you are learning more about them in chemistry* (female, Year 8).

In contrast to those pupils who tended to find learning similar things in different subjects confusing, there were those who appeared to appreciate and welcome opportunities to explore the learning of knowledge and skills from different angles – 'triangulators' perhaps. References of this type were coded under the category: '*you learn more through different perspectives or pooling ideas*'. In these explanations, pupils seem to be explicitly or implicitly recognising that knowledge can be as much subjective as objective, that truth is often constructed from multiple perspectives, and that eclecticism and synthesising insights are valuable forms of knowledge creation. Some examples were:

> *Maybe sometimes it will help you and then you will understand it better, if you kind of get two sides to the story or something* (female, Year 10).

> *You tend to look at it from a different angle so it's actually really helpful usually* (female, Year 10).

> *Well, it's strange because you have to do the same thing in two different subjects. ... It's good because some teachers, the English teacher might tell you something different to the drama teacher, something the drama teacher doesn't tell you, and the drama teacher might tell you something that the English teacher doesn't. Then you can put your ideas together* (female, Year 10).

And from a more sceptical and less enthusiastic Year 8 grammar school boy: '*Well, I suppose it does give you a different view, but it's basically the same thing.*'

Some pupils explained the virtues of cross-curricular links more in emotional and motivational terms. There was, for example, the 'feel good' factor: '*It makes you feel a bit smarter that you know what they are talking about already*' (female, Year 9) and '*It's usually quite good and interesting if you are just starting that topic, you are confident that you know more about it*' (male, Year 10). From the motivational perspective, some pupils thought that continuities made learning more interesting: '*... gets further into it and sometimes it makes it more interesting*' (female, Year 10). In a similar vein, others considered links desirable as they brought an enjoyable aspect to an otherwise less enjoyable subject: '*Because it's got a couple of subjects linked in ... and it comes to ... in maths, and it's linked to another subject, and you liked doing the other subject, so you like doing the maths*' (male, Year 7). These latter enjoyment-based type of comments were disproportionately more common among Year 7 pupils.

Closely related to these motivational reasons was the category of 'increased awareness of relevance and importance'. Amongst these references to 'status-enhancing' benefits were the following:

> *Well, it reminds you of it, and at least you can say that it links up and that there is a reason for learning the subjects in it, because there wouldn't be no reasons if you were just learning them for the sake of learning them* (female, Year 10).

> *I think it's good because you realise that subjects can link up, that home economics isn't just home economics like, things can happen* (female, Year 10).

> *It just, kind of, makes me think 'Oh, this must be quite an important thing then', if we are doing it in this subject and another subject* (female, Year 9).

Finally, a small number of pupils alluded to the value of building a sense of coherence through such linkages:

I think it is good to see that what you are learning is relevant in one subject as to another (male, Year 9).

I think it's really good because it sort of helps you going from one subject to another (female, Year 9).

Before leaving the pupil interview data, it is quite instructive to consider the remarks of those pupils who gave conditional replies to the question on whether or not cross-curricular links were advantageous to their learning. They carry possible implications for the ways in which learning across the curriculum may need to be planned and mediated in order to assist pupil learning. Most of the pupils who gave a mixed or conditional response indicated that the links were generally considered helpful so long as they avoided becoming boring by, as often appeared to be the case, covering exactly the same work. Hence, the important message from these pupils was that mere duplication was tedious and unproductive, while revisiting a skill or an area of knowledge with more depth, greater breadth or from a different perspective was beneficial. The following comments are illustrative of this point of view:

It's not helpful if it's the same thing, but if you are doing the links that you might do something about it in one subject, but another aspect of it in another, it's quite interesting (female, Year 10).

Well, it was boring when we did the water device. It was good fun in chemistry because we went quite detailed into it, but then when we did it in geography, well, I think it must be about the fourth time I have done about the water cycle, so it was pretty boring ... Sometimes it's good because it means if you didn't really understand it, you can go back and do it again, but then sometimes it's boring (female, Year 9).

Well, sometimes you say to them [the teachers] *'Oh, we have done this in another class', but they just tell us exactly the same thing and I already know it. Even though they are told, they just do exactly the same thing of what we do in the other subject. I think it's quite boring if we do exactly the same thing, but they might teach us a different way, and it might be a better way and we will remember* (female, Year 9).

To extend the analysis of the interview data, around a quarter of the pupils were examined individually over the period of the seven interviews (rather than as a group longitudinally). This sub-sample was selected to include pupils of varying attainment and engagement levels, gender and school type (with some from each school). The key overall point to emerge from this ipsative form of analysis was the fairly high degree of variation in comments regarding the worth of links from the same pupil over the years from interview to interview. Some pupils displayed variation in their attitudes towards links mentioned at each interview (e.g. offering positive and negative comments with little overall pattern) or variation in the type of positive and negative reasons volunteered. Others exhibited greater consistency in terms of overall positive or negative predispositions, but often with an element of unexpected variation every now and then (e.g. the odd negative feeling thrown in at some interviews when otherwise generally positive, or a negative aspect expressed at the end of an increasingly positive trend). Most probably, these variations are caused by differences in the recalled cross-curricular linkages that occurred during the term in question.

Before concluding, we move on to consider teachers' views on the extent to which their pupils do or do not perceive links across the curriculum.

3.6.3 Teachers' perspectives

Teachers on whether pupils perceive links

Overall, it was found that the majority of the teachers interviewed believed that their pupils were aware of cross-curricular links and continuities, to varying degrees. Only 15 teachers expressed the view that they doubted whether pupils were conscious of any links across the curriculum. Disproportionate numbers of teachers who were not convinced that their pupils were aware of such links were located in primary and grammar schools rather than secondary schools. Primary teachers, perhaps, felt that their pupils had not reached a required level of maturity and/or ability to perceive such links, while the grammar school scepticism may be due to stronger subject and examination-oriented boundaries. Examples among grammar school teachers included:

> *No. I think they come into the classroom and see this as history – a different subject: switch off from geography, switch on to history. I am not sure if our pupils, even at Key Stage 4, do perceive the connections or whatever. I would be doubtful about that* (history teacher).

> *Well, you think that they do see it until you try to do a piece of work that in one subject involves a bit of maths, and you find that they find it difficult to relate* (home economics teacher).

In addition to the group of teachers who considered that pupils were not aware of links, 23 teachers said they were not sure whether pupils would be or not. Again, markedly more of these were from grammar schools than the basic ratio of grammar school teachers to secondary and primary teachers would suggest.

In contrast, 66 teachers did believe that pupils were able to identify cross-curricular links. Interestingly, amongst the primary teacher sub-sample, there was a tendency to refer to pupils' ability to transfer skills rather than recognise cross-curricular links. Confirming the trend on grammar school teachers' perceptions of pupils' awareness of links, the evidence revealed that there were considerably fewer teachers in grammar schools stating a belief in pupils' awareness of links than would be expected. Furthermore, grammar school teachers were markedly more likely to consider their pupils as having a subject-based view of the curriculum, whereas all four of the teachers who suggested that pupils have perspectives relating to links across the whole curriculum were from secondary schools.

Looking more specifically at the type of comments made, older pupils were commonly referred to as being more aware than younger ones, and to a much lesser extent, '*brighter pupils*' were sometimes mentioned as being more likely to be aware. However, of the ten teachers who proposed this, none were to be found in grammar schools: five were in secondary schools and five in primary schools.

Teachers on the value of coherence and links across the curriculum

Post-primary teachers

Teachers were also asked whether they felt that coherence across the curriculum was educationally desirable. About one in six teachers were not sure whether greater coherence across the curriculum was desirable:

> *I'm not convinced that it matters ... I think if they feel it's relevant for them, or they can relate it to the outside world, whether it relates to all the other little boxes that are supposed to live in the outside world or not, I don't know whether they make that match. And I'm not sure*

whether the subject would live or die in their minds if that match was ever made. I'm not convinced of it – that's all I'm saying (science teacher).

I don't think that it is absolutely necessary or essential for effective learning. I think they learn effectively regardless (Spanish teacher).

I suppose it is, but it's not of the utmost importance. The most important thing is that they have the knowledge and the understanding of the specific skill. So, it's not really important that they can draw a flow diagram to other subjects or whatever. It's just sometimes institutions or departments of education seem more concerned about that than they are about the actual content of each individual subject. They are more concerned about drawing policies to make sure that you have links with other subjects than making sure that their syllabus is correct in the first place, see what I mean? It's subject based and that's the way it should be. At the end of the day, education is academic and they are here to learn, and you hope that they are going to learn in all subjects, and so really the fact that there are links between the subjects is just periphery. It's not an issue (geography teacher).

Moreover, six went so far as to say that coherence was undesirable. Four of these gave the reason that it was confusing for pupils, or certain pupils at least, to be taught similar material from different perspectives (e.g. '*I don't think it's necessary or anything, and sometimes it may cause problems if they are taught two different ways*' – maths teacher); one suggested that repetition leads to frustration; and a Year 7 teacher feared that the subject would lose its identity, commenting: '*I'd rather just do geography for geography's sake … … for them learning that way rather than "Oh God, we're just doing a test of English".*' One geography teacher seemed to start by rejecting lateral coherence, but concluded that some form of coherence may be desirable:

I think probably from a child's point of view … I was going to say the less duplication. I am thinking more of the 'Oh, we have done that', so from that point of view, perhaps you need to develop a more overview of the whole curriculum.

Running through such comments, it is possible to discern at least two notions of a coherent overview of the curriculum: one that is designed to minimise duplication and another that accepts overlap and attempts to use it to reinforce effective learning. The former resembles Buchmann and Floden's (1992) notion of coherence as tidying up of all the loose ends.

There were nine teachers who offered qualified support to the value of links. The most common of these was the proposal that links should be natural and not artificially imposed, with each subject preserving its own coherence and identity. Others would only encourage coherence across the curriculum if it did not compromise the allegedly more important continuity and progression over time: '*I suppose that's one of the advantages of having a subject-based model: you can concentrate on getting the continuity and so on*' (Year 7 teacher).

However, indicating some solid support for across subject coherence – at least in principle – a majority of teachers (69) nominated at least one aspect of desirability. The most common reason for the desirability of coherence was that it offers continuity and a rounded education (from 24 teachers). Typical comments in this category were:

I think they should see education as broad, and then focus in on the different subjects, but they should see that the school is, sort of, a one-entity thing (science teacher).

So, basically, what we are trying to do is to give them a rounding and an understanding of what's actually going on in real life, and that things aren't, sort of, ring-fenced, and that there's so many things that are playing in on their area (technology teacher).

The last phrase touches on relevance, which amounted to the second most frequent reason, namely that it increases a subject's value or relevance across the curriculum (from 18 teachers):

It might be more beneficial to them if they were using computers in another context, as well as with me. It probably would help them to relate more to what a computer can do, if they're outside of my class using them (IT teacher).

I think it's to bring my own subject alive (PE teacher).

I suppose if you link every subject, then it's more likely that every subject will be deemed as valuable as the other, isn't it? (modern languages teacher).

Although the numbers of subject teachers are quite small, there was still a discernible trend for teachers of subjects other than English, maths and science to be more likely to claim the benefit of increasing subject value and relevance across the curriculum as a reason for the desirability of linkages. For example, four out of seven French teachers, two of the five PE teachers and two of the five technology teachers cited it as a reason, whereas only one out of seven English teachers, one out of six maths teachers and none of the six science teachers did. As indicated earlier, science teachers seem particularly focused on the internal agenda of their own subject, with minimal attention on other areas of the curriculum.

Significantly, the first two benefits most frequently mentioned by teachers – 'breadth and roundness' and 'relevance and status' – were only suggested by small minorities of pupils. The third most common reason advanced by teachers did receive more support from pupils, namely that cross-curricular linkages aid understanding by providing complementary but different perspectives (from 16 teachers):

If I am teaching a subject in biology and they have been able to say to me 'Oh Miss, we have been taught that in geography', I think that other input is very valuable in terms of helping them to make a whole understanding of what I am saying, and to see it from an alternative perspective (science teacher).

Less frequent reasons were that it helps pupils develop problem-solving skills and thereby prepares for adult life *'which is cross-curricular'* (from 12 teachers):

They don't go out into their lives and do mathematical tasks and geographical tasks. Life is about everything that we have learned, using all their knowledge and skills to solve the problems, just because life is cross-curricular, I suppose (maths teacher).

Yes, I think it is, because a lot of careers involve two or three different areas that they may move into and it's good training for life, you know. And they themselves have strengths in different things and it's nice to let them see that it's possible to pull these things together (music teacher).

Oh yes, absolutely, more breadth. They can say 'OK, I can use what I have learnt here. I am not starting from scratch. I can use what I have learned somewhere else to do this.' Certainly, I think that's a good thing, because it shows a certain degree of application within their mind from what they have learned to something else. I think that's a good thing, yes, if they are aware of it (maths teacher).

Increased motivation was cited by seven teachers, and the time-saving factor by four. There were also ten teachers who stated that they felt all pupils benefited from links. However, more mature or older pupils were frequently considered to be either only or especially likely to benefit, and also, to a lesser extent, higher-attaining pupils. Two teachers actually considered that younger pupils especially or only benefited, and two felt that well-motivated pupils did likewise. However, the main thrust of opinion was that all pupils benefit or older pupils in particular.

Primary teachers
Whilst primary teachers were not specifically asked about the desirability of links across the curriculum, they were questioned about the advantages of, and the reasons behind, their own timetabling policies, with particular regard to the issue of how they balanced subject-based timetables as opposed to the use of integrated topics. Although this is clearly not analogous to the question of the desirability of links, since many links may exist in a subject-based timetabling policy, it is an issue that is perhaps most appropriately aired here.

There was a strong preference for subject-based approaches. Of the 15 respondents to the question, 12 indicated that the use of a subject-based timetable was desirable in the present circumstances, often giving several reasons.

The most common reason put forward by six teachers was that a subject-based system increased continuity and progression and could ensure a more systematic coverage of the curriculum in each area. Perhaps reflecting the dropping of cross-curriculum coherence in the policy documents leading up to the introduction of National Curricula, this finding further illustrates the extent to which there is at least a tacit acceptance amongst the teaching profession that lateral coherence should be sacrificed in order to achieve coherence over time in the form of continuity and progression.

Three teachers gave the NIC as a reason for adopting a subject-based approach; three attributed it to the Transfer Tests or other assessment policies; and three gave the need to ensure that minor or least favoured subjects were always covered when under pressure to fit in so much English, maths and science. Also, one teacher felt that the system established a routine, and another that it allowed for the provision of specialist teaching in areas in which one teacher may not be proficient. In contrast, only three teachers expressed favour for less subject-based teaching or volunteered reasons for the desirability of integrated topic teaching: one teacher felt that it saved time, whilst two considered that such teaching would be more interesting, enjoyable and relevant for the pupils.

Teachers on the development of coherence
Although normally not specifically questioned from this angle, many teachers put forward the case for developing coherence across the curriculum in their schools – 48 teachers made at least one reference to this (88 references in total). That more should be done in general terms was indicated by five teachers. Time

constraints were an issue raised by 18 teachers: nine of these teachers indicated that there was too much to cover in the Programmes of Study for there to be time for linkages, whilst two of them stated that they had no time for liaison with teachers of other subjects.

The development of existing or proposed procedures to increase coherence was mentioned by 39 teachers. Looking more specifically at the existing procedures, 11 of the teachers coded here mentioned numeracy and literacy policies, seven referred to IT coordination policies and four mentioned departmental liaison. The literacy and numeracy policies varied from handbooks to more active policies such as the following:

> *We would have a policy, you know, 'Literacy Across the Curriculum' and 'Numeracy Across the Curriculum', and the English Department would occasionally focus on and ask every department this week to emphasise spelling and get them to use dictionaries and things like that. It would be ongoing, but there would be a week in the year where they would say 'We really need to focus on it this week, maybe to remind the youngsters'. But that wouldn't just be Year 8; that would be all the way across* (Vice-principal).

From the references to departmental liaison within it, one school appeared to have done more than most:

> *We have had a ... committee running for a long time ... where each area of the curriculum was represented on that committee. And through their research work, looking at links and cutting out the overlap where it was unnecessary and maintaining it and strengthening it, sort of consolidating ... through that, all departments have become aware of links and where possible links could take place* (technology teacher).

Proposed procedures predominantly focused on more departmental liaison and teacher liaison, with 15 of the teachers referring to this. Perhaps importantly, three teachers recommended that there should be a facility for teachers to refer to all other subjects' programmes of work (as opposed to actually suggesting direct liaison and cooperation); for example:

> *I often feel it would be nice to have a huge family tree set in chronological order so that you can look across and say 'We are doing that in maths. We are doing that in English. I could fit that in there better'. But the notion of doing all that and something which is probably difficult to do, we don't have time to do it. But, if there was something that could readily be referred to, to see 'That's what geography is doing at the moment', that would be good. Then, I could move my topic up a week and bring it in at the same time. But the answer is: in school there wouldn't be a formal structure. Anything that we know that is going on in other subjects, as far as I am concerned, would be by chance* (technology teacher).

Along similar lines but developing it further, some teachers sought coordination from the management of the school with regard to numeracy in order to give cross-curricular coherence throughout all years. One teacher, for example, suggested:

> *In terms of developing numeracy in the school, all heads of departments were required to cover any of these areas. They are trying to see the*

bigger picture and, in a way, I think it would take a whole-school questionnaire strategy to see whether we are doing this in Year 10. Would it link better doing it at Year 9 at a more basic level, because that's when history are covering it? (music teacher).

One English teacher also mentioned that cross-curricular awareness in younger pupils would only be facilitated by a reorganisation of the school day: '*They can see it in Year 10 or 11, but really further down the school, there would need to be a restructuring of the school day to facilitate that for junior kids.*' Perhaps the main issue raised here is that teachers commonly feel the need for provision of a structure or framework to help them increase coherence, whether it is through departmental liaison, a means of referring to other subjects' Programmes of Study or more organised coordination from the top. Time problems were often raised with regard to the issue of bringing about any changes in this area of curriculum planning and implementation.

3.7 Summary and implications

In this chapter, we have concentrated on pupils' experiences of lateral or between- and across-subject coherence. We began by noting that, unlike other curriculum design principles (e.g. breadth, balance and relevance), coherence across the curriculum is not widely regarded as an essential feature of an effective curriculum. Although some attempt was made in Northern Ireland to address the issue of coherence through the concept of 'Areas of Study', the research found that schools rarely used these categories in curriculum planning, they were not part of teachers' frames of reference and they had virtually no experiential impact on pupils.

Pupils were generally not aware of any planned coherence in the courses offered by schools. Nevertheless, about half of the schools (in the Year 10 Survey) had at least one policy for teaching some skills across the curriculum. Cross-curricular policies for IT, PSE skills and study skills were cited more frequently than those for literacy and numeracy. There was some evidence that the existence of such policies was related to the frequency of pupils' perceptions of cross-curricular learning, at least as far as IT and PSE were concerned. Teachers reported that they allowed cross-curricular links to occur through serendipity rather than preparing for them in any coordinated way.

However, evidence from the pupil pursuit observations suggested that relying on serendipity could be a highly inefficient strategy that fails to maximise the potential for learning. The observations showed how pupils' days were strongly compartmentalised into a series of episodic and subject-based experiences, typically with high-profile internal narratives but minimal references to learning in other areas. Yet, however limited and partial their perspectives may be, pupils had a greater experiential awareness of the actual continuities across subjects than their teachers. That said, the observations often demonstrated how many valuable opportunities to construct creative connections and extend learning between the skills, knowledge and intelligences offered by different subjects passed by unnoticed and untapped for both teachers and learners.

Not surprisingly, given the bounded nature of the curriculum as experienced, pupils tended to internalise the whole curriculum and their learning within it predominantly in subject categories. Signs of any development over the Key

Stage 3 phase towards more overarching and less subject-based constructions of the whole curriculum were negligible – even for high academic attainers. Through such techniques as concept mapping when pupils were asked to draw a diagrammatic representation of 'All I can learn at school', three main constructions of the whole curriculum emerged, as pupils mapped their learning according to:

♦ common content knowledge across subjects;

♦ perceptions of different subjects' relative usefulness and/or importance; and

♦ two broad dichotomous categories: 'practical' versus 'academic' subjects.

Far from helping learners 'to cohere' the curriculum, in the sense of assisting them to pull together its different elements, the latter two may encourage them to do the opposite – to push it apart. Thus, they may lead to curricular fission rather than fusion.

The most frequently perceived link between subjects was that between geography and science. Science frequently appeared in nominated links, while IT and the expressive arts were rarely cited. Commonalities in content knowledge represented the dominant mode through which learners perceived continuities between subjects. In contrast, there were appreciably fewer references to skills-based perceptions of cross-subject links – a finding that could pose challenges to any move towards a skills-based curriculum as specified. There was evidence to suggest that low academic attainers had greater difficulties in perceiving continuities or links in their learning across the curriculum.

In each year, a solid majority of pupils affirmed that the links they perceived between subjects had helped their learning. The most frequently cited reasons for valuing cross-curricular links were that they helped pupils learn in more depth or more detail and develop a better understanding, and aided their progress. Although mere duplication was seen as tedious and demotivating, many pupils saw value in learning about things from slightly different perspectives. In short, most pupils sought greater coherence across the curriculum and valued the benefits of this for their learning.

The evidence suggested that numerous valuable learning opportunities for exploring links across the curriculum were lost to both pupils and teachers. Additionally, in the absence of any significant guidance to the contrary, the concept maps indicated that some pupils internalise images of the whole curriculum that may have deleterious effects on their learning and motivation. In view of these and other problems, it seems appropriate to raise the question as to how pupils and teachers could be given regular opportunities to collaborate in the framing of creative and constructive models of their learning across the curriculum as they experience it. In a sense, this would be to encourage pupils' and teachers' meta-awareness of their learning and the curriculum.

The findings suggest several practices that could be adopted and developed at school level by management. At the central level, four possible implications for development are highlighted below.

Reducing duplication

Whilst much of the evidence offered here would generally accord with Buchmann and Floden's (1992) warnings about the limitations of coherence as 'tidying up the loose ends', the nature and frequency of pupils' testimonies to the overlap between geography and science would suggest that revisions to the orders for these two subjects may be needed in order to avoid unnecessary duplication and a possible inefficient use of precious time.

A framework for cross-curricular skills and knowledge

As some teachers were requesting, a framework for identifying and, if possible, sequencing the acquisition of skills and knowledge across the curriculum would represent an important contribution to developments in this area. Partly as a means of avoiding the long-standing debate and even polarisation between skills, on the one hand, and knowledge, on the other, the multiple intelligences theory (Gardner, 1993) may offer a useful alternative model for such a framework.

Integrated projects and courses

The findings relating to Year 7 pupils' awareness of cross-curricular links, despite a major commitment to subject-based teaching among the primary schools, suggest that the development of courses based on integrated topics could greatly enhance learning experiences at Key Stage 3.

Opportunities for pupils and teachers to construct coherence across the curriculum

The evidence presented above suggested that on most days of the week several valuable learning opportunities for exploring continuities across the curriculum were lost to both pupils and teachers. Additionally, in the absence of any significant guidance to the contrary, the concept maps indicated that some pupils internalise images of the whole curriculum that may have deleterious effects on their learning and motivation. In view of these and similar problems, it seems appropriate to raise the question as to how pupils and teachers could be given regular opportunities to collaborate in the framing of creative and constructive models of their learning across the curriculum as they experience it. In a sense, this would be to encourage pupils' and teachers' meta-awareness of their learning and the curriculum. As such, these opportunities could form part of a wider and progressively sequenced programme of study in the development of study skills and learning awareness – with particular benefits to the goal of fostering effective lifelong learners. They would also offer an arena for exploring and developing pupils' cross-curricular learning in the areas of values, attitudes, morals and norms. In many respects, this would be to adopt the vision of coherence as advanced by Buchmann and Floden (1992):

> ... *The metaphor of an evolving web or woven cloth clarifies which points on the continuum of consistency and disjointedness are educative. Educational coherence depends on patterns and loose ends; on materials, animating ideas, and formative activities. Threads interlace, but there are fuzzy bits and dangling strands of experience and meaning, with out-worn or thin patches being worked over or unravelled over time.* ...

Briefly exposing students to numbers of disparate ideas and practices may hardly touch them; it may lead to a web with so few connections that learners cannot orient themselves and that many parts will escape their attention or recollection. A course of studies aiming to tie up all loose ends, on the other hand, will be tightly structured; it may lead to a sturdy web that is densely entwined, yet with such a smooth boundary and filled-in texture that it admits few opportunities for making connections to new ideas or readily meeting the unexpected. Educational coherence is found where students can discover and establish relations among various areas of sensibility, knowledge, and skill, yet where loose ends remain, inviting a reweaving of beliefs and ties to the unknown.

Frame occasions for constructing coherence: Do not fabricate consistency. Where the curriculum veers toward consistency, it verges toward narrowness, rigidity, and the dispossession of learners (Buchmann and Floden, 1992, p.8).

4. COHERENCE OVER TIME: CONTINUITY AND PROGRESSION

4.1 Introduction

In a recent literature survey of research into pupils' experiences of the curriculum (Lord and Harland, 2000), out of 131 publications reviewed, only 14 pertained to studies of the curriculum characteristics of continuity and progression. Most of these were restricted to an examination of the interface between Key Stages, especially Key Stages 2 and 3. The present study does make reference to continuity and progression at this transition, though its main focus is pupils' perceptions and experience of these concepts within the subjects they studied over the course of Key Stage 3.

While the previous chapter considered coherence across the curriculum, this chapter examines coherence over time, largely in the shape of continuity and progression. Continuity and progression are defined here as the building blocks of internal coherence within subject areas. Continuity is depicted as a sequencing of related units of content, tasks and skills within the past, present and future teaching programmes, while progression is interpreted as the unfolding learning experience achievements of individual pupils.

In the interviews conducted with pupils in the five case-study schools, the term 'follow-on' was substituted for the concepts of continuity and progression, and in the annual pupil survey, 'build on' was used as the proxy. Pupils' perceptions of continuity and progression lesson-to-lesson were derived from the semantic differential item in each of the annual pupil surveys. An additional question in the surveys gleaned their views on continuity year-on-year.

This chapter will discuss the opinions of pupils and, where relevant, those of their teachers, in relation to continuity and progression as applicable to each of the five curriculum levels described earlier in the report (see Chapter 1). Comments on the curriculum as specified, planned and mediated are taken primarily from teacher interviews. The learners' accounts provide most of the material for the discussion of the curriculum as experienced and internalised. Because of the association between continuity and progression in the curriculum and pupils' progress, measured formally through assessment, the final section relating to the curriculum as internalised also presents the findings on the learner's own sense of progress and their appraisal of the helpfulness of methods of assessment. The chapter ends with a consideration of pupils' experience of the Key Stage 3 tests.

4.2 Curriculum as specified

The need for continuity and progression was established in the early documents of the NIC: the Programmes of Study and Attainment Targets are intended to '... *provide a framework for achieving continuity ... allow for, and encourage progression ... allow pupils to make identifiable progress through the levels at their own pace and from their own starting point'.*

The NIC, while stipulating what should be covered in each subject, allows schools to decide how and when in the course of the Key Stage, the specified content and skills should be addressed. There was evidence that the NIC was perceived to be successful in providing a '*framework*' within which teachers could develop subject continuity and progression over a Key Stage. Eleven long-standing Key Stage 3 teachers specifically commented that the NIC had led to greater continuity in their subjects than had existed prior to its inception. This affirmation came primarily from the Vice Principals interviewed, and perhaps significantly, from teachers of practical subjects (technology, PE, art and music), as well as a French teacher and two history teachers. They attributed this directly to the Programmes of Study, which they said facilitated long-term planning across the Key Stage and, more importantly, provided a structure to follow: '... *it gives us an outline, some kind of structure that we can work within to plan the schemes of work*' (technology teacher).

In addition to these interviewees comparing the current situation with pre-NIC days, other post-primary interviewees and Year 7 teachers described how they had been able to take the curriculum specifications, and devise schemes of work for their Key Stage that incorporated appropriate continuity and progression:

> *We are given the curriculum, but it doesn't actually specify what we do in Years 8, 9 or 10 ... so we sort of decide what happens in Year 8, what happens in Year 9, what happens in 10. The way we have done it, I think we have done it pretty well* (technology teacher, secondary).

> *It's up to individual schools how they set out their programme of work for each year, what they take from the curriculum and set it out for themselves. That should allow each individual teacher then to bring in their own continuity and progression, but it is there in the curriculum* (Year 7 teacher).

A major consideration of whether a curriculum as a whole has appropriate continuity and progression is how smoothly pupils can move from one Key Stage to the next. There was acknowledgement, especially from Year 8 science teachers, that the NIC had improved the situation for their subject because previously '... *the word 'science' would not even have figured at primary school*', whereas now '*children know a lot more science*'. Additionally, the NIC, in providing one compulsory curriculum for Year 1 to Year 12, meant, for one science teacher, that there were now '*much greater opportunities for continuity*' between the primary and post-primary phases. And, two history teachers were convinced that there was now '*a line of development right from primary up to Key Stage 4*'.

However, the comments of two-thirds of the Year 8 teachers, representing all subjects, showed that transition was still problematic. They rejected the view that the NIC had led to greater continuity between the final year of primary school and the first year of post-primary, pointing to four particular obstacles:

♦ **Variation in the knowledge and skills of pupils transferring from different primary schools.** A head of English explained: '*We can nearly pick out who has come from which primary school, because they won't have certain skills that are highly developed, whereas other students coming from different primary schools will have different skills.*' Faced with little consistency in the level of skill and knowledge which pupils from different feeder schools possessed, teachers felt that they had to pitch their lessons at the level of the

least experienced pupils. Some of their classmates, consequently, had to '*double back*' and repeat earlier learning, which bored them and hindered their progression.

♦ **Pupils transferring without the skills or knowledge necessary to tackle Key Stage 3 work.** Concern was expressed that some Year 8 pupils who entered post-primary school did not possess the expected skills. Therefore, their new teachers had to '*go over stuff which arguably we shouldn't have to*' (technology teacher) and use time that would otherwise have been spent on Key Stage 3 work. Teachers of practical subjects like technology and music, whilst praising the '*heroic*' efforts of primary staff, felt that non-subject-specialist teaching in primary schools and a lack of resources accounted for deficits in pupils' skills.

♦ **Coverage in Key Stage 2 of Key Stage 3 material.** Year 8 teachers described incidences where their pupils had read novels, studied topics or used textbooks in their primary schools which were intended to be covered during Key Stage 3: '*Primary schools very often move into Key Stage 3, and make it very difficult for me. For example, when we began with Year 8 in September, when I introduced them to their main textbook for the year, I was told that some of them had already used it in primary school, yet the 'Normans' is not, by any means, a Key Stage 2 topic*' (history teacher, grammar).

♦ **The impact of the Transfer Procedure.** A music and a geography teacher felt that continuity and progression in their subjects were interrupted by the Transfer Test, which forced concentration on English, maths and science in Years 6 and 7 and the neglect of other subjects until the Test was over. Consequently, continuity and progression in the NIC were '*put on hold for a period of time, and then picked up again*' (geography teacher). Conversely, a maths, an English and a science teacher acknowledged that the Transfer Procedure encouraged continuity and progression between the Key Stages in their subjects because Year 8 pupils from different feeder primaries covered the same work in preparation for the Test: '*... earth and space would have been a topic on their 11+, so they would all have done that*' (science teacher).

There was recognition, however, that better liaison and planning between primary and post-primary schools could resolve the first three of these problems. Indeed, there was evidence that where effective links had been established across these Key Stages, these difficulties had been avoided. One of the case-study secondary schools held regular, formal meetings with staff from its feeder primaries in order to discuss specifically the curriculum at the Key Stage 2/3 interface, and fewest teachers from this school raised the problems highlighted above.

To sum up therefore, while there was some consensus that the NIC had improved continuity and progression within Key Stages 2 and 3, it had not always succeeded across these Key Stages, though there was acknowledgement that primary–post primary liaison could help to resolve this.

4.3 Curriculum as planned

As Hargreaves (1991) has observed, teachers have the advantage of a '*much more sophisticated*' experiential coherence than their pupils; as an art teacher in the pilot phase remarked, they have a '*master plan*'. Apart from a very small minority of interviewees who appeared to delegate responsibility to the textbook, this was evident in an analysis of the teachers' discussions of continuity and progression. Their accounts of the internal coherence of their subjects were ascertained through asking whether the content and skills they had taught during the term of their interview had involved a sense of continuity and progression. Their comments revealed the multi-faceted process involved in attempting to provide internal coherence within subjects.

Firstly, continuity and progression were established within the weeks in which a particular topic or aspect of a subject was taught. How this was built in depended on the nature of the subject. In history, for example, continuity was largely dictated by the chronology of the period under study: '... *we would have gone from Henry VII right up to Elizabeth really and the Armada*'. Teachers of subjects like maths, science, geography, English and music described how continuity would involve an increase in the difficulty of the work as the topic progressed:

> *The stuff we did, like, for example, the percentage work, you would start off by basic percentages and by the time you have finished the percentage work you are applying that to real-life situations. For example, someone goes into a sale, they get 20 per cent off a coat, the coat originally cost £50, what did they get it for in the sale, and certainly there's a definite progression from going from what is ten per cent of £100 to doing a question like that* (maths teacher).

In addition to approaches that built continuity and progression within the topic under study over the weeks in which it was taught, topics also had a continuity and progression which linked back to what had previously been covered and projected forward to future learning. The thread could be established through the reacquaintance with and advancement of the skills the subject developed, for example, through work on sources in history, and in geography through graph and map work. Teachers of maths, science and home economics described how they would revisit topics previously studied, but at an increasingly challenging level to '*step up*' pupils' knowledge and skills base:

> *What I aim for in class is a circular method of teaching. In other words, you keep coming back to it, and adding to the foundation that was already there. You know, for example, as we work our way through the school, our programmes of study, there'd be certain aspects that we would cover in Year 8, which will be covered again in Year 10, an example being electricity and we keep coming back to that one and adding to what we've done* (science teacher).

The comments of teachers of English and practical subjects like art and technology showed that in their subjects, this was established through the increasingly advanced use of the same media or materials across topics/projects and years, and through '*recurring skills*'. Language teachers also stressed the recursive nature of their subject and conveyed that every topic or piece of work involved the '*pulling together*' of all previous learning in the subject because '*language is not an isolated thing*'.

The above discussion has shown that teachers build the internal coherence of their subject over the duration of a particular topic, through a Key Stage and at times throughout pupils' school careers. Continuity and progression appeared to underpin the very notion of 'curriculum as planned'. In light of this, it is noteworthy that pupils' perceptions of continuity and progression – presented in a later section on the curriculum as experienced – reveal that although most pupils could detect a version of 'follow-on' in their learning, only the highest attainers were discerning the internal coherence of their subjects in the way in which it had been planned. For example, some high attainers recognised that over the course of a topic in maths and science, the level of work would increase in difficulty, and showed awareness that in languages they needed to apply all that they had covered previously to understand their current work. The vast majority of pupils lacked awareness of teachers' overview and their 'master plan', and therefore had only a partial view of the internal coherence within their subjects. This, undoubtedly, affected their capacity to fully identify, comprehend and experience continuity and progression in their learning. That said, it is perhaps important to consider the point at which the curriculum as planned meets the curriculum as experienced in order to ascertain whether any other factors hinder the learner's appreciation of continuity and progression. This chapter, therefore, will now turn to curriculum as mediated.

4.4 Curriculum as mediated

In an attempt to determine how continuity and progression were conveyed in the classroom, an analysis was undertaken of 50 of the lessons that were observed as part of the pupil pursuits conducted in the case-study schools. These lessons were drawn from all five schools and from each year of Key Stage 3. The analysis revealed that continuity and progression tended to be implicit in the lesson, but were rarely explicitly stated or explained to pupils.

It was characteristic for teachers to begin with a brief recapitulation of the previous lesson – 'last week you made a fruit salad' – occasionally coupled with series of questions which revised what had been covered in the last session. This 'recap' tended to last no more than two minutes. A rare exception was the history teacher who spent seven minutes of a 40-minute single period revising 'the last thing we did on the Bayeux Tapestry', which involved her showing the class the pictures of the Tapestry that they had seen in their previous lesson, explaining what they depicted and asking questions. At times, no recap was evident: a maths teacher, for example, began by issuing the homework to be completed for the next lesson, then immediately instructed: 'We'll turn to page 175 ... exercise A on angles.' Further, it was not always made absolutely clear how previous and new learning related. Indeed, there was an example where progression within a lesson was not identified: a history lesson began with a test on crime and punishment in Norman times, and once this was completed, the teacher immediately embarked on the techniques the Normans used for keeping control. No explanation was offered as to how this linked with the earlier subject matter. By contrast, however, in a geography lesson, the teacher did specify how the last lesson and earlier learning were relevant to the current session: 'We finished looking at soil [questioning of pupils] ... Next, we're looking at deforestation [questioning of pupils] ... Now, we are going to look at where deforestation causes problems such as the soil erosion in Nepal.'

Further, there was rarely a plenary session to establish what had been achieved in the course of a lesson and to explain how this would be taken forward in the next session. At times, a piece of written work at the end of the lesson or the homework set would pertain to and sum up the subject matter covered, though it was not made explicit that this was the purpose. In only three of the 50 lessons analysed did the teacher recap today's learning or look forward to next time: '*Last week, we did "Old MacDonald" with four beats. What have you learnt today?*', and '*Next week, we'll try and perfect it* [pupils' compositions] *with the recorder and do it in four parts*'. As the above extracts illustrate, two of these were music lessons, both lasting double periods, and the longer time frame of these lessons, most probably, gave teachers a greater opportunity to draw the lesson together; the single lessons analysed tended to end hurriedly, with teachers dispensing homework or quickly finishing the task in hand, as pupils hastily packed away before rushing to their next lesson.

In the lessons analysed where a new topic was initiated, pupils might be directed to '*start a new page*' or to '*draw a title page*', but there was no introduction to tell the class what the new subject area would cover or how long they would work on this. In a science lesson in which a new topic on classification was begun, the researcher observed that the teacher gave a '*brief definition*' of the concept, asked a series of questions (presumably to ascertain or to recap pupils' existing knowledge) then turned a video on. Similarly, in a Year 9 maths lesson, the teacher announced to the class: '*We're starting something new, today.*' Worksheets had already been given out and she asked a pupil what the new topic was – '*Angles*'. She asked three brief questions about the mathematical principles of angles, then instructed the class to complete '*... questions 1a to 1d*' on the worksheet, telling them: '*This is something I'm sure you're coming back to from primary school.*' Whilst this teacher did highlight that this was a topic that should tie in with their earlier learning (though she did not make certain that this was the case), there was no explanation as to why they were returning to this theme or how they were to build on their knowledge.

To sum up, it should be stressed that the lessons analysed were by no means devoid of continuity and progression, only that they were implicit. The aim of a lesson, for example, would not be specifically stated. The results of the annual pupil surveys, presented in the next section, show that generally, youngsters could discern 'follow-on' in their lessons, possibly implying that at some level they were attuned to this implicit continuity and progression. However, the findings from the interviews conducted with pupils in the case-study schools reveal the variety, and frequently the simplicity of their understanding, of the internal coherence in their subjects. Therefore, a review of practice might be worthwhile whereby the continuity and progression, which as the previous section documented, clearly underpinned schemes of work and teachers' thinking, were made explicit to pupils in the classroom.

Using survey and interview data, the chapter will now move on to consider in depth continuity and progression as seen from the pupil perspective.

4.5 Curriculum as experienced

Both the annual pupil surveys and interviews in the case-study schools sought pupils' perceptions of the internal coherence within their subjects. This section begins with a discussion of pupils' perceptions of continuity and progression lesson-to-lesson: the questionnaire findings are presented first, highlighting the amount of continuity discerned; followed by an analysis of the interview responses on the type of continuity perceived. In the latter part of this section, the learner's view of continuity and progression year-on-year is considered.

4.5.1 Perceptions of continuity lesson-to-lesson

The amount of continuity perceived

In the annual questionnaires, pupils were asked to rate on a five-point scale how far they felt that the lessons in each of their subjects had usually built on the last one or had not usually built on the last one during the course of their current school year. Table 4.1 shows the mean scores of their responses for each subject overall for each year of Key Stage 3 ranked by the Year 10 order.

Table 4.1 **Pupils' perceptions of the amount of continuity lesson-to-lesson by year group**
1 = lessons usually build on the last one; 5 = lessons don't usually build on the last one (i.e. the lower the mean, the greater the perceived continuity)

	Year 8	Year 9	Year 10
Subject	Overall mean	Overall mean	Overall mean
History	2.3	2.1	2.0
Maths	2.5	2.1	2.1
Geography	2.5	2.3	2.2
Technology	2.6	2.3	2.2
French	2.4	2.4	2.3
English	2.5	2.5	2.3
Science	2.6	2.4	2.3
RE	2.6	2.4	2.3
Irish	2.6	2.3	2.4
Health education	2.8	2.7	2.4
IT	2.9	2.6	2.5
Home economics	2.9	2.8	2.8
Art	3.0	2.9	2.8
Music	3.0	3.0	3.0
PE	3.1	3.1	3.1
Overall mean	*2.7*	*2.5*	*2.4*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

During Key Stage 3, a clear pattern emerged in terms of pupils' perceptions of continuity and progression in their lessons:

♦ each year, the mean scores for the subjects were mostly positive, indicating that pupils generally felt that their lessons had followed on;

♦ each year, pupils perceived least follow-on in practical subjects: especially PE and music, but also art and home economics, and IT in Year 8; and

♦ throughout Key Stage 3, history was the subject in which the greatest degree of continuity was observed – other subjects associated with high levels of follow-on were maths, geography and technology (in Years 9 and 10).

There were, however, some changes over the three years of inquiry.

♦ As they progressed through each year of Key Stage 3, pupils observed more continuity in their lessons. As can be seen from the overall mean scores, there was an increase from Year 8 (2.7) to Year 9 and in the amount of follow-on observed, and then a smaller rise in Year 10.

♦ Reflecting this trend, in Year 9, there were eight subjects (history, maths, geography, science, technology, RE, Irish, IT) in which pupils perceived considerably more follow-on than they had in Year 8. In Year 10, compared with Year 9, pupils saw notably more continuity in only two subjects (English and health education), neither of which had increased markedly from Year 8 to Year 9.

♦ Running against the general trend, there were four subjects in which there was no increase in the level of continuity observed during Key Stage 3. Three of these subjects, all practically oriented – home economics, music, and PE – were amongst those which pupils consistently deemed to have least follow-on. The remaining subject in which there was no increase in the amount of perceived follow-on was French – the only subject of the four in which respondents detected a comparatively high level of continuity. As Chapter 6 will convey, French was consistently regarded as the most difficult subject and it may be that these two findings had a bearing upon one another. All four subjects where there was no increase in the degree of continuity observed during Key Stage 3 were predominantly skills based.

♦ Maths, technology, health education and IT were the subjects in which there was the largest increase in the amount of continuity perceived by respondents during Key Stage 3. The presence of technology and IT in this list is notable, given that there was no upturn in pupils' perceptions of follow-on in the other practical subjects. Indeed, technology was an anomaly amongst the practical subjects: the only one in which pupils detected a considerable amount of follow-on – in Years 9 and 10, it emerged third highest in a ranking of subjects by the level of continuity perceived.

The following table, Table 4.2, presents the mean scores for each subject disaggregated by attainment grouping for all three years of inquiry, according to the Year 10 rank order.

The results presented in Table 4.2 clearly show that pupils' capacity to perceive continuity and progression was closely associated with their level of ability. In each year of Key Stage 3, low-attaining pupils observed the least continuity overall in their subjects, and high-attaining respondents discerned the most. Commensurate with the overall trend in the data, as Key Stage 3 progressed, each attainment group perceived more follow-on in their lessons. Low attainers, however, made the least advance in the amount detected. Indeed, in Year 10 low-attaining pupils were not seeing the levels of continuity that high attainers had observed in Year 8.

Table 4.2   Pupils' perceptions of the amount of continuity lesson-to-lesson by level of attainment and year group

1 = lessons usually build on the last one; 5 = lessons don't usually build on the last one
(i.e. the lower the mean, the greater the perceived continuity)

Subject	Year 8				Year 9				Year 10			
	Overall mean	Low group	Mid group	High group	Overall mean	Low group	Mid group	High group	Overall mean	Low group	Mid group	High group
History	2.3	2.6	2.3	2.0	2.1	2.6	2.1	1.8	2.0	2.3	1.9	1.7
Maths	2.5	2.7	2.5	2.2	2.1	2.5	2.1	1.8	2.1	2.5	2.1	1.7
Geography	2.5	2.7	2.5	2.3	2.3	2.6	2.2	2.0	2.2	2.5	2.1	2.0
Technology	2.6	2.8	2.6	2.3	2.3	2.7	2.2	2.1	2.2	2.5	2.2	2.0
French	2.4	2.7	2.4	2.2	2.4	2.7	2.3	2.1	2.3	2.6	2.2	2.1
English	2.5	2.6	2.5	2.6	2.5	2.6	2.4	2.5	2.3	2.5	2.3	2.2
Science	2.6	2.8	2.6	2.3	2.4	2.7	2.4	2.2	2.3	2.6	2.2	2.1
RE	2.6	2.8	2.5	2.3	2.4	2.7	2.3	2.2	2.3	2.6	2.2	2.0
Irish	2.6	2.8	2.6	2.3	2.3	2.5	2.3	2.1	2.4	2.5	2.4	2.4
Health education	2.8	3.0	2.6	2.4	2.7	2.7	2.7	2.6	2.4	2.6	2.3	2.2
IT	2.9	3.0	2.9	2.7	2.6	2.8	2.7	2.5	2.5	2.7	2.4	2.2
Home economics	2.9	3.0	3.0	2.8	2.8	2.9	2.8	2.5	2.8	3.0	2.7	2.6
Art	3.0	3.1	2.9	3.0	2.9	2.9	2.8	2.8	2.8	2.9	2.7	2.8
Music	3.0	3.2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.1	3.0	2.9
PE	3.1	3.1	3.2	3.0	3.1	3.2	3.1	3.1	3.1	3.2	3.1	3.1
Overall mean	*2.7*	*2.9*	*2.7*	*2.5*	*2.5*	*2.7*	*2.5*	*2.4*	*2.5*	*2.7*	*2.4*	*2.3*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

The development in the levels of continuity seen by mid-attaining pupils during Key Stage 3 is noteworthy. The total mean scores for Year 8 show that the amount of follow-on perceived by mid-attaining pupils was half-way between that observed by high and that seen by low attainers; therefore, high-attaining pupils saw markedly more continuity than their mid-attaining peers, and low attainers, appreciably less. As Key Stage 3 progressed, the gap between mid- and high-attaining pupils narrowed; whilst in contrast, the difference between mid- and low-attaining pupils grew more pronounced. This indicates another point in relation to low-attaining pupils' capacity to recognise continuity in their subjects: not only do they perceive less overall, but also by the end of Year 10, the improvements made by mid-attaining pupils in detecting follow-on have not been matched by low attainers, leaving them further adrift than in Year 8.

As Table 4.2 shows, for most subjects, the actual amount of continuity discerned reflected levels of attainment; so, for example, in Year 10, there was a difference of 0.6 in the degree of follow-on high and low attainers saw in history (even though for both groups – and mid-attaining pupils too – it was the subject in which they perceived the most continuity). However, against this recurring pattern in the data, in each year of Key Stage 3, each attainment group perceived very similar levels of follow-on in art, music and PE. This may suggest that academic ability had much less influence on pupils' capacity to discern continuity in these three practical subjects. Alternatively, given the comparatively low follow-on ratings which these subjects received overall, it may be the case that high- and mid-attaining pupils were accurately perceiving the lower levels of continuity in these subjects, bringing their ratings on a par with those of low attainers. This actually means that the range of results is greater for mid- and, especially, high-attaining pupils, than it is for low attainers, and may indicate that the higher attainment groups demonstrate greater discrimination in their perceptions of continuity.

Most interestingly, English also emerged as a subject where attainment appeared to have less impact on the pupils' perception of continuity: in Years 8 and 9, there was no difference between low and high attainers in the amount of follow-on they perceived in English lessons. In fact, in an ordering of subjects by attainment group in terms of the level of continuity seen, English was consistently near the top for low attainers, whereas it was closer to the middle or bottom for high attainers. For example, in Year 8, English was the subject, joint with history, in which low attainers perceived most continuity, whereas high attainers observed more continuity in nine other subjects (although for both groups its mean score was 2.6). The perceptions of mid-attaining pupils are again revealing: in Year 8, English was third when subjects were ranked by the amount of follow-on they saw, yet in Years 9 and 10, when they discerned levels of continuity more in line with high attainers, English slipped in the ranking to eighth. Only in Year 10, did it appear that high attainers were beginning to recognise more follow-on in English compared with their other subjects: it was one of three subjects in which they perceived a much greater level of follow-on than they had in Year 9, and for the first time they detected conspicuously more continuity in this subject than low attainers. However, for most of Key Stage 3, level of attainment appeared to have little bearing on perceptions of continuity in English – an unexpected result given the pattern in the data – and this may suggest that English teachers take a different approach in their mediation of the curriculum to low attainers, perhaps even when taught in the same class as high attainers, which transcends the impact of ability.

The mediation of English in grammar schools in particular may have had some bearing on these results, as this was one of only a handful of subjects in which

grammar and secondary school pupils registered similar levels of continuity throughout Key Stage 3. Indeed, in Year 8, secondary school respondents detected marginally more. For all other subjects, throughout Key Stage 3, grammar school pupils perceived appreciably more continuity in their lessons than their secondary school counterparts. The gap between the two groups was widest in Year 8 and narrowest in Year 9, when secondary school pupils' responses regarding follow-on were notably more positive than in Year 8. Though secondary school respondents never equalled their grammar school peers, their perceptions of follow-on did rise more over the three years – perhaps a reflection of the fact that of the three attainment groups, it was mid-attaining pupils, most of whom attended secondary schools, who made the greatest advance in the level of continuity detected over the course of the Key Stage.

Most likely mirroring the greater proportion of low attainers in these institutions, respondents from schools with high levels of eligibility for free school meals consistently saw less continuity in lessons than their peers attending schools with a low level of eligibility. It may be noteworthy that the difference in these groups' perceptions of follow-on was most marked in Year 9 – the year in which there was the smallest gap between grammar and secondary school pupils' mean scores. This may perhaps give some indication that it was low attainers living in areas of socio-economic deprivation who had most difficulty recognising continuity in their subjects.

The degree of pupils' engagement with learning appeared to have less influence on their perception of continuity, as throughout the three years, the overall mean scores of high-, mid- and low-engaged respondents were very similar. There were some differences in their perceptions of follow-on in specific subjects, and where this was the case, pupils exhibiting low levels of engagement discerned less continuity than their high-engaged peers. Moreover, as Key Stage 3 progressed, there was some indication perhaps that level of engagement was becoming more important in pupils' capacity to detect follow-on: in Year 8, there were four subjects, but in Years 9 and 10, seven subjects, where low-engaged respondents saw conspicuously less follow-on than their high-engaged counterparts. Further, in Years 9 and 10, mid-engaged pupils' perceptions of continuity began to emulate those of their high-engaged contemporaries, whereas in Year 8 they had been more closely aligned to low-engaged pupils. By the end of the Key Stage, therefore, there appeared to be an etching of a pattern in the data similar to that in the results by level of attainment, albeit much less ingrained.

Pupils' gender did not appear to make a conspicuous difference to their capacity to perceive continuity in their subjects. Throughout Key Stage 3, there was no notable difference overall in girls' and boys' mean scores for this item. However, by the end of Year 10, there did appear to be the start of a trend by which girls perceived more follow-on than boys. In this year, there were four subjects (science, French, careers education and home economics) where there was a marked difference, all in the girls' favour, in the amount of continuity perceived. In Years 8 and 9, girls only perceived more follow-on than boys in two subjects, home economics and health education, both of which might stereotypically be considered traditionally female subjects.

To sum up briefly, from these data from the annual pupil surveys, it appeared that level of attainment was a key factor in pupils' capacity to discern follow-on. The next section will take the discussion forward by examining the type of continuity pupils perceived, as gleaned from the interviews conducted in the five case-study schools.

The type of continuity perceived

The impact of pupils' level of attainment on their recognition of continuity was clearly evident in the case-study schools. It emerged that the influence of attainment encompassed not only how much, but also how follow-on was perceived. This notion was first proposed in the Year 7 report (Harland *et al.*, 1999a), which relayed how pupil interviewees had conveyed three versions of 'follow-on': academically 'below average' children saw **extraneous procession**, whereby continuity existed by proceeding through a textbook; mid-attaining pupils tended to interpret follow-on as **clustering**, the continuance of the same subject matter for a period of time; and high attainers most frequently perceived **incremental acquisition**, the build-up of new knowledge and skills. Drawing on this typology, an examination of interviewees' comments during Key Stage 3 revealed a continuum in the perceptions of different types of follow-on. Within each of the three types of perceived follow-on, there was a range of emphases that varied in the level of sophistication (as shown in Figure 4.1).

An analysis of pupils' attainment by their depiction of follow-on revealed that youngsters of all abilities interpreted follow-on under each of the three categories, though the responses of low attainers tended to fall under the lower orders of each of extraneous procession, clustering and incremental acquisition, and high attainers within the upper orders. This meant therefore that in Key Stage 3, as in Year 7, there were greater concentrations of low and high attainers at the opposite ends of the continuum, with more low attainers falling under extraneous procession and more high attainers under incremental acquisition.

The 'Continuum of Perceived Follow-on' (Figure 4.1) will now be described in detail:

Extraneous procession

At the lowest level, follow-on was interpreted as a matter of proceeding through a pre-set text or textbook. Those pupils who made reference to this kind of follow-on perceived it most frequently in book-led subjects, especially maths and English (through reading the same novel in class), and also languages and geography. The follow-on in the written work in home economics and science was also described as thus, though to a lesser extent.

Those pupils who indicated extraneous procession construed continuity in certain subjects wholly in terms of the textbook rather than in the content or skills learnt. As Figure 4.1 shows, though, some variance in the sophistication of their responses was evident. At the lowest level of all, as well as apparently no comprehension of internal coherence within the subject matter, there was little awareness of the structures of the textbooks. Follow-on at this point was 'page by page' and appeared to be one long, uninterrupted road which pupils were conveyed along as they *'turn the page'* (boy, low attainer, Year 9). At a slightly higher order, the textbook again defined the follow-on but pupils showed more awareness of the arrangement within it: for these youngsters, there were junctions where one chapter finished and they moved on to the next. They tended to see follow-on 'chapter by chapter': *'In maths, every day we go in and we will keep following on until we finish that chapter and then we will move on to another chapter which is next in the book, and every day we will just keep following on'* (female, mid-attaining pupil, Year 10).

Figure 4.1

Continuum of Perceived Follow-on

EXTRANEOUS PROCESSION   CLUSTERING   INCREMENTAL ACQUISITION

task orientated	page by page	chapter by chapter	continuance ad infinitum	topic awareness	accumulating knowledge	increasing difficulty	advancing skills	application
We do like half the questions one day and the other half the next day	You turn the page again.	Maths follows on because we are staying on the same chapter and then we just change chapters.	It's just like the Normans all the time.	In science we do something for about five weeks, keep doing different experiments, and then we move on.	Follow-on is in all subjects … we do about something and every week we add on a bit and add on a bit.	Maths is mainly building on, you start with the easy stuff and then you move on to the harder stuff.	French has follow-on because at the start we learnt the words and now we are starting to learn how to put them into sentences.	In most subjects, you don't just forget what you have learnt and learn a new thing, it all has to link together to make sense.

During Key Stage 3, half of the low-attaining interviewees (seven of 14) in the case-study sample interpreted follow-on as extraneous procession, including four pupils who repeatedly described continuity in this way. Low attainers in particular, and also mid-attaining pupils, were more likely to depict extraneous procession of the lowest order – 'carrying on the page'. Unlike Year 7 (Harland et al., 1999a), at post-primary level some high attainers did frame follow-on by the textbook. This was particularly the case for grammar school pupils: by the end of Key Stage 3, approximately half of the grammar school case-study sample (11 out of 24 pupils) had described follow-on like this at least once, compared with a third (three of nine) of the high attainers attending non-selective schools. None of these grammar school pupils had defined follow-on as extraneous procession in primary school, and there was some intimation that it was the mediation of the curriculum in grammar schools that led them to describe continuity like this during Key Stage 3. Implicit in their accounts of follow-on was a sense of the monotony of the curriculum mediation they experienced:

> [Geography follows on] *because we would do one page and do homework and we would correct it and then go on to the next page and then do homework and correct it* (female, Year 8).

> *I think maths* [follows on] *because we work out of a book and you just follow on and you do a different exercise, and you just follow on. ... French is more or less the same, we just carry on in the book. ... We carry on in the book and then we listen to a tape and then we do some exercises from the tape* (female, Year 9).

It is perhaps possible that the routine of lessons was such that pupils became focused upon the components of the habitualised ritual, like the textbook, rather than the subject matter. It may be the case that the predictability of lessons contributed in part to grammar school pupils complying with, rather than actively engaging with, the curriculum – this was a theory posited in the Year 8 report (Harland et al., 1999b) and in Chapter 7 of this publication to explain these pupils' lower levels of enjoyment of the curriculum. There was some suggestion in these grammar school pupils' descriptions of extraneous procession that they were cast in essentially passive and conforming roles, rather than actively engaged with their learning. For example, two grammar school girls denied the presence of follow-on in subjects which did not proceed 'page by page': one girl saw no continuity in French because '... *he would spend a couple of periods on one page and then he would skip a couple of pages*' (female, Year 10).

Another low-level version of continuity was also evident in pupils' responses: a short-term '**task-oriented**' interpretation. Follow-on occurred when a task started in one lesson was finished in the next:

> ... *if we do any course sheets and stuff, we would follow them on the next week in most subjects, if we don't get them finished* (female, mid-attaining pupil, Year 8).

> *You might do half of the work like questions one to five the first day and the next day four or five more questions to finish off* (male, low attainer, Year 9).

In Year 8, pupils of all abilities had perceived this type of continuity in their subjects; in Years 9 and 10, however, it was almost exclusively low-attaining interviewees who construed follow-on as such. Indeed, four low attainers, all boys, made reference to this task-oriented continuity in each year of Key Stage 3.

It is perhaps worth considering this task-oriented view of continuity briefly, in particular whether such a short-term perception of follow-on calls into question pupils' true comprehension of what they are learning. If the only link between one lesson and the next is an unfinished exercise, continuity is established solely by the task in hand rather than through the continuance of the subject matter or any development in knowledge and skills. Were these pupils who repeatedly defined follow-on like this able to join together the tasks in order to create a full picture of what they were learning, or did each piece of work remain separate in their minds? In an attempt to fathom this, analysis was undertaken of these pupils' responses to a question that had asked them to think back over the term and describe what they had done and learnt in each of the subjects. It emerged that two of these pupils, the more able of the four (relatively speaking), could explain what they had studied: *'In science ... the digestive system of your body ... how it works'*; *'In French ... how to describe people'*. However, the other two boys, both deemed *'very weak'* by their teachers, one of whom was registered on the Code of Practice for Special Educational Needs for learning difficulties, recalled the tasks: *'In French ... we listen to a tape and have to find answers off the tape and draw stuff for the wall'*; *'In science ... we did experiments with a Bunsen burner'*; *'home economics, just worksheets'*. In subjects which were content-driven or had involved project work, these two pupils were better able to recall the details of their learning – *'In RE we did a project ... about Adam and Eve'* – though there could still be emphasis on the task: one of the pair whose class had been covering the Spanish Armada in history relayed: *'We are drawing ships.'* There was some evidence, therefore, that, for the lowest attainers, their internalisation of the curriculum over time was led by the tasks and exercises they had been required to do rather than the content or skills they had addressed. It is perhaps unsurprising that when these two boys were asked specifically whether they had learnt anything from all they had done in each subject, they were occasionally doubtful.

Clustering

Described above was extraneous procession, where continuity was signalled by the tools – the textbook or tasks – rather than the substance of learning: pupils who defined follow-on like this made no reference to the subject matter of lessons. Clustering, the second main category on the continuum, offered an advance on this. In clustering, the existence of follow-on was predominantly bound up with the particular area under study. Follow-on occurred when the same theme *'carried on'* over a period of time. For those interviewees who made reference to clustering, no mention was made of any build-up of knowledge or development in skills: clustering denoted continuity not progression: *'Geography, we have just really been doing about farming and things like that, just kept going on about it'* (female, Year 10).

Clustering was the type of continuity most frequently referred to by pupils. They detected follow-on of this kind in all subjects, though primarily in history, maths, science, English and geography. Continuity in practical subjects – especially art and technology, then PE, and, to a lesser extent, home economics and music – was also interpreted as clustering.

Pupils of all abilities observed this type of follow-on, though mid-attaining pupils most readily described continuity thus. However, there was some difference in pupils' articulation and understanding of clustering depending on their level of ability. Low attainers were more inclined than the other ability groups to give a sense that one theme continued interminably, conveying a strong sense of the endlessness of the subject matter. This was 'continuance *ad infinitum*': *'It just*

keeps going on and on about the Normans' (male, low attainer, Year 8). Overall, mid- and high-attaining pupils seemed more attuned to the topic structure and were more inclined to relay how they would work on one topic for a period of time, and once that was completed they would move on to another. They had more 'topic awareness': *'Science, because you just do something and it takes about five weeks to do a certain topic and then you move on to the next one. And history too, it takes about five weeks and geography, RE'* (male, mid-attaining pupil, Year 10).

As Key Stage 3 progressed, some change was evident in pupils' descriptions of clustering. In Years 8 and 9, after a general question about follow-on, they needed to be asked specifically about the continuity in each of their subjects and at times sounded doubtful in their replies: *'Nearly every week, we do the weather in geography and I suppose the droughts are the same as the weather and ... the wind and storms and stuff'* (male, mid-attaining pupil, Year 8). Possibly as a result of their growing experience as learners, in Year 10, youngsters were more inclined to declare immediately that follow-on occurred in *'most'* or *'all'* subjects then proceed to relay that a theme or topic would continue from lesson to lesson. High-attaining pupils were particularly fluent and certain about the topic structure of their subjects at the end of Key Stage 3:

> *That happens all the time, even in PE, because we never get one topic done in one lesson. The different topics take like a term probably, like a month to cover everything, so you just follow it on for like a couple of weeks or a month or a term, until it's finished* (female, high attainer, Year 10).

> *Every subject does* [follow on] *until we start a new topic, and there's only a few topics that we do in a year in a subject, about three or four, and all our lessons follow on ...* (female, high attainer, Year 10).

Most pupils who interpreted continuity and progression as clustering tended to see each topic separately: work followed on until they *'finished'* the particular theme under study. This was often signified by an assessment: *'You just follow on with the subject and you do it until you learn what it is and then you do a test usually, at the end of it, when you finish a certain thing you are doing'* (female, Year 9). After this, follow-on stopped because they would *'move on to something else'*. A small number of high attainers did, however, make links between the topics. They were particularly adept at this in geography: *'In geography, we did about deforestation and the problems it has, and then it is on the same line ... we were doing about the Alps and the problems it has'* (male, Year 9).

Incremental acquisition

Whereas clustering had offered an advance on extraneous procession, incremental acquisition was a more sophisticated interpretation of follow-on again. Clustering was linear, simply concerned with the continuance of the theme over a period of time; incremental acquisition, however, involved a recognition of the build-up of new knowledge and skills. It was primarily high attainers who depicted follow-on as incremental acquisition. Indeed, at times high-attaining interviewees even denied the existence of follow-on between lessons when they had not experienced a sense of acquiring new knowledge or skills. For example, in Year 9 an English lesson observed in a grammar school was the class's weekly library session during which they always read quietly; observed pupils felt that this lesson had not followed on because '... *we just do the same thing every week'*.

Analysis of the pupils' responses showed that there were four different versions in their descriptions of incremental acquisition. The first three of these – 'knowledge accumulation', 'increasing difficulty' and 'advancing skills' – appeared to be subject-related, and indeed, pupils' comments largely reflected teachers' own interpretations of the continuity and progression in their subjects. The fourth version was 'application', quite definitely the most sophisticated version of incremental acquisition, and therefore follow-on overall, to emerge from the data.

The first sub-type within incremental acquisition was 'knowledge accumulation'. Those pupils describing follow-on in these terms recognised the build-up of subject-based knowledge, and were clear that within a topic, with each lesson they were '*adding more*' and '*going deeper*' into what they had learnt already: '*... we go into a wee bit more depth in every lesson*' (female, Year 9). Given the nature of knowledge accumulation, it is perhaps unsurprising that this was the type of incremental acquisition seen in subjects that are traditionally perceived to be content-laden, such as history and RE:

> *History is building on, so it is. About Oliver Cromwell, if we did him and the Civil War, then we done about him winning the Civil War* (male, Year 9).

> *RE builds on: you would maybe look at Mother Theresa's early life one day and then her life as a teacher the next, and it sort of builds up, go through her life* (female, Year 10).

As highlighted above, it was predominantly high attainers who interpreted follow-on as incremental acquisition. A number of mid-attaining pupils did describe continuity as knowledge accumulation.

Secondly, there was 'increasing difficulty'. Here, youngsters acknowledged that within a topic, they would begin with the most basic concepts and would progress to more complex levels with each lesson: '*Maths builds on it a lot because we do more advanced things than we did in the last period, and science as well*' (female, Year 8). As this comment illustrates, this kind of incremental acquisition was seen mainly in academic skills-based subjects, particularly maths and languages. To a lesser extent, the follow-on in science and geography was also described like this. This, and indeed the other types of incremental acquisition, were notably absent from pupils' descriptions of the follow-on in practical subjects (save music). Exceptionally, one boy saw the continuity and progression in art in these terms: '*In art ... each week we have been doing about flowers and it has been getting harder*' (male, Year 9).

Thirdly, some perceptions of follow-on denoted 'advancing skills'. This type of incremental acquisition included shades of both knowledge accumulation and increasing difficulty, but was possibly a step up from these because of pupils' recognition that follow-on in the curriculum meant a build-up of their skills base. These pupils explicitly associated the progression in the curriculum with their personal progress and development in their own knowledge and skills, and perceived this in languages particularly: '*It* [follow-on] *happens in French, because we are learning how to say things about ourselves and then you can say them in sentences and then you can write a paragraph about ourselves*' (female, Year 8).

The fourth and final sub-type was 'application'. The youngsters articulating this, the most sophisticated type of incremental acquisition, saw the connectedness and cross-pollination of learning. Whereas all aforementioned pupils tended to

105

view follow-on thematically, describing continuity and progression *within* the particular topics they studied, these interviewees saw beyond this and were aware that in their new work they were required to draw on and apply the knowledge and skills already gained from any part of their previous learning:

> *I think there's follow-on in French, because if you're sitting doing like different subjects in French, ... you can't forget about what you've just done because you need it, you know, to build up a conversation or something. You can't forget and think 'Oh, I've done that, sod it', you know, you have to remember* (male, Year 8).

> *Maths, it would follow on all the time. Like, we would do about division one week and then we would go on the next week about division ... just you do it all in one go. Then, you just move on to a different topic like formula. You do that in all one go and then you would do fractions. But in fractions we have done different things like dividing fractions, putting fractions into a formula, adding them and subtracting them* (male, Year 10).

Maths received the most nominations as the subject in which pupils perceived this type of incremental acquisition; followed then by languages, English, science, geography and then music. There was only a small clutch of pupils (nine) who defined continuity and progression in terms of application.

Four of these nine pupils to identify 'application' were particularly consistent in perceiving this kind of incremental acquisition: they detected it in a number of subjects and from Year 7 frequently depicted follow-on in these terms. These four pupils were all classified as high attainers in Year 10; interestingly, however, three of the four had each been described as '*average*' or '*slightly above average*' by their Year 7 teachers. Was it the capacity of these youngsters to recognise the need to apply existing skills and knowledge to their new work that was a contributory factor in boosting their level of attainment? Because they knew they had to integrate all their learning in a subject – '*... put it all together like a big jigsaw*' – did this enable them to turn from pupils deemed '*average*' by their primary teachers into high attainers by the end of Key Stage 3?

In summing up this discussion of the 'Continuum of Perceived Follow-on', there are four final points to make.

Firstly, the continuum categorises pupils' spontaneous responses to a question about the 'follow-on' lesson-to-lesson in their subjects. A purpose of this chapter on continuity and progression was to ascertain how the curriculum for each subject hung together over time from the perspective of the learner. It was evident from pupils' interpretation of follow-on that they operated on different time spans: for example those youngsters who took a 'task-oriented' view saw follow-on day-to-day: '*Maths follows on ... Say, you were doing an exercise on pie charts, you only get half the exercise done, you have to go in the next lesson and finish it*' (male, Year 10). Interviewees articulating 'topic awareness clustering' perceived it over weeks at a time: '*HE would follow on ... like we did nutrients last couple of months and we just did our test today and changed over to different stuff*' (male, Year 9). And the children who referred to 'application' pulled together their learning from over the years: '*In languages ... all the stuff that you learn at the start would form the foundations for everything else that you would learn*' (male, Year 9).

Secondly, while the survey findings revealed an association between the amount of continuity detected and pupils' level of attainment, the case-study data highlighted a similar relationship between ability and the types of follow-on discerned. Broadly speaking, low-attaining pupils emerged as least advanced in their definitions of follow-on: they were inclined to interpret follow-on as extraneous procession, especially the lower order 'page by page' and 'task-oriented' versions, and were more likely than mid- and high-attaining pupils to take the more basic view of clustering, 'continuance *ad infinitum*'. Mid-attaining youngsters were most likely to depict follow-on as clustering, especially 'topic awareness'. Regarding incremental acquisition, they saw it primarily in terms of 'knowledge accumulation'. High-attaining interviewees overall were most sophisticated in their perception of follow-on, being more inclined than the other ability groups to define continuity as incremental acquisition.

Thirdly, the continuum of follow-on shows how widely pupils' perceptions of the continuity and progression in their subjects range. Such variety in interviewees' descriptions of follow-on would suggest that in any class there will be differences in how individual pupils comprehend the internal coherence of the curriculum. This would be the case in skills-based academic subjects in particular: pupils' accounts of follow-on in the likes of maths, French and English spanned the 'Continuum of Perceived Follow-on'. Because of the association between ability and the type of follow-on discerned, this would also be a particular issue in mixed ability classes – though not exclusively. Recall that pockets of high attainers saw follow-on as extraneous procession. This would therefore suggest that in setted or streamed classes and in grammar schools there might still be variety in how pupils mentally map out the curriculum they cover in each of their subjects. For example, asked about the follow-on in a French lesson on an observed day in Year 10, one high-attaining girl in a grammar school felt that there had been no follow-on because '... *we just started on a new topic*'. A similarly high-attaining classmate did detect follow-on, however, because '... *in French ... you don't just walk in and start all over again; it's all to do with what you have learnt before, even from first year*'.

Finally, analysis showed that the interviewees who most consistently described follow-on as incremental acquisition during Key Stage 3 also defined it thus in Year 7. This would perhaps suggest that pupils' capacity to comprehend the internal coherence of the curriculum at a sophisticated level begins in the primary school. There may be considerable merit, therefore, in a stronger emphasis on raising all pupils' awareness of continuity and progression in their learning at primary level. After all, as stated above, it may have been their recognition that the curriculum was held together over time through 'application' and the need to apply existing knowledge and skills to new work, which played an important part in turning three '*average*' pupils in Year 7 into high attainers in Year 10.

The above discussion has pertained to pupils' perceptions of 'follow-on' lesson-to-lesson. This section will proceed to consider their views of continuity year to year.

4.5.2 Perceptions of continuity year-on-year

In the annual questionnaire, pupils were asked to respond to six statements that compared their current year of school with the previous year by circling 'agree', 'disagree' or 'not sure'. How they responded in each year is shown in Table 4.3 below.

Table 4.3   Pupils' responses to statements comparing learning in their current year of school with the previous year

	Year 8			Year 9			Year 10		
	Agree %	Disagree %	Not sure %	Agree %	Disagree %	Not sure %	Agree %	Disagree %	Not sure %
Preparedness year-on-year: The things I did last year prepared me well for this year	69	12	19	70	10	19	69	11	20
Repetition year-on-year: Many of the subjects that I have done this year just repeated what I learnt last year	30	48	21	19	60	21	23	54	23
Level of learning year-on-year: I have learnt more things this year than I did last year	78	8	14	67	12	21	66	11	23
Follow-on year-on-year: Most of the subjects done this year followed on well from what I did last year	49	18	33	56	13	31	57	12	31
Enjoyment year-on-year: I have enjoyed the things I have done this year more than the things I did last year	52	27	21	53	23	24	54	20	25
Interest year-on-year: I was more interested in my school work last year than this year	17	60	23	31	47	22	25	54	21

Base: Year 8 = 2,694; Year 9 = 2,605; Year 10 = 2,595.

Source: NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys

As Table 4.3 shows, a recurrent theme in the data was pupils' tendency to favour current year of schooling: to mix metaphors, familiarity breeds fondness.

The following discussion considers how, over the course of Key Stage 3, pupils responded to each of the six statements: preparedness, repetition, level of learning, continuity and progression, enjoyment and interest. For each statement, any noteworthy differences in the appraisals of the various pupil and school types are highlighted. The section ends with a brief account of pupils' transition to post-primary school drawn from these statistics.

Preparedness and repetition year-on-year

Firstly, throughout the study, the vast majority, around 70 per cent, of pupils felt that their previous year of schooling had prepared them well for the current year. This may give some suggestion of the appropriateness of the degree of progression in learning in the NIC Programmes of Study and in schools' schemes of work.

It is perhaps noteworthy, however, that there was such consensus on this throughout the study given the fluctuations in the perceived degree of repetition year-on-year in Key Stage 3. Year 8 emerged as the year which involved the most repetition of the previous year's studies; Year 9 was the year in which the fewest number of pupils felt there had been repetition; and the Year 10 results showed an increase on Year 9 in the percentage of respondents who believed they had repeated last year's studies, though not as many as had believed that Year 8 had repeated Year 7. The case-study work substantiated these findings:

- In their Year 8 interviews, pupils recounted numerous incidences when they had repeated work studied in Year 7: '*Some maths we have been doing is the same stuff we did in primary school: the exact same book, in fact*' (male). Year 8 teachers bemoaned the lack of consistency in the work covered by pupils transferring from different primary schools, which forced them to pitch their lessons to the level of the least experienced pupils.

- The lesser repetition between Year 9 and Year 8 most likely reflects the fact that teachers were following the schemes of work their departments had devised for Key Stage 3.

- In Year 10, pupils' recollections of how in English, maths and science they had revised earlier years' work in preparation for the Key Stage 3 test would explain the increase in the degree of repetition during this year. The case-study evidence also lent further weight to the intimation from the questionnaire responses that revision for the Key Stage 3 tests occurred most in grammar schools: results from the survey showed that the percentage of grammar school pupils agreeing that Year 10 repeated Year 9 rose five times more than the corresponding percentage for secondary school pupils.

It may be a cause for concern that in only one of the three years under study (Year 9) did a definite majority of pupils (60 per cent) feel that their current year's studies had not repeated the previous year's work. In Years 8 and 10, though approximately half the sample did not see any repetition, the remaining half (approximately 50 per cent) were either uncertain or did think they had repeated the previous year's work.

Level of learning year-on-year

Whilst throughout Key Stage 3, the vast majority of pupils agreed they had learnt more in their current year of schooling than in the previous year, the figures were highest in Year 8 when over three-quarters of respondents acceded, as opposed to two-thirds in Years 9 and 10. This is perhaps a noteworthy result, given that in Year 8 conspicuously more pupils felt that they had repeated the previous year's work than was the case in Years 9 and 10. To some extent, at least, it may have been the differences between primary and post-primary school in terms of the content and structure of the curriculum – the presence of new subjects like modern languages, the teaching of subjects by specialists in specific timetabled slots – which made Year 8 pupils almost unanimous that they had learnt more that year than they had in Year 7. Further, as will be shown later, in Year 8, pupils expressed their highest levels of interest in their schoolwork. A note of caution may be necessary when considering these results: the incremental nature of learning may have made it difficult for pupils to assess accurately how much had been learnt in one year alone compared with the previous year alone.

Continuity and progression year-on-year

In terms of the continuity pupils perceived year-on-year during Key Stage 3, Year 8 emerged as the year when fewest pupils felt that their subjects had followed on well from Year 7 work. In Year 9 and Year 10, a higher percentage of pupils detected continuity between their current and previous year's studies. Confirming teachers' opinions reported earlier, these findings indicate that there is greater continuity within Key Stage 3 than there is between Key Stages 2 and 3.

However, considering that pupils were following the same Programmes of Study and schemes of work and there were external cues – the same school, the same teachers and the same series of textbooks – to alert them to continuity within the Key Stage 3 curriculum, there was really only quite a small increase in the percentage of respondents who perceived continuity between Years 8 and 9 (56 per cent) and Years 9 and 10 (57 per cent), compared with the percentage (49 per cent) who felt that Year 8 had followed on well from Year 7. Further, each year about a third of pupils answered 'not sure', a reflection of their difficulty either in comprehending what 'follow-on' meant or actually in recognising it. The section of this chapter on the curriculum as mediated presented an analysis of lessons observed for the pupil pursuit which showed that when teachers revisited topics, they did so with relatively little explanation as to exactly how the new work would advance previous learning. The above findings suggest there may be considerable merit in a stronger emphasis on increasing pupils' awareness of continuity and progression in their learning year-on-year.

As attainment level had been influential in pupils' perception of continuity lesson by lesson, a breakdown of the results by the background variables showed a correlation between pupils' level of attainment and their recognition of follow-on year by year. In each year of Key Stage 3, high attainers discerned markedly more continuity from the previous year's work than their low-attaining peers (there was a difference between these two ability groups of 13–14 per cent each year). And, whilst it was part of the overall trend for a substantial minority of pupils to consistently answer 'not sure' to this item, ability appeared a determining factor: each year over one-third of low-attaining respondents were unsure compared with nearer a quarter of high attainers.

The selective school system in NI directs most (though not all) high attainers into grammar schools; consequently, throughout the Key Stage, respondents from these schools did perceive more follow-on year to year than their secondary school

contemporaries. However, there was possibly some intimation in the data that these grammar school youngsters saw this in spite of the curriculum mediation in their schools. Although the grammar schools did have a much greater concentration of the sample's high attainers and no low attainers, the difference between the proportion of grammar school pupils who agreed that their current year followed on from last year and the proportion of secondary school pupils agreeing was never as striking as might have been anticipated – the biggest difference was eight per cent in Year 8. To hypothesise, it may be that the high- and mid-attaining pupils in secondary schools discerned continuity year to year with greater acuity than their counterparts in grammar schools (perhaps as a result of the mediation of the curriculum in their schools), thus compensating for their low-attaining classmates' vaguer perceptions and raising secondary school pupils' overall percentage.

Pupils' level of engagement was also found to be associated with their perception of continuity year to year, an unexpected finding perhaps given that level of engagement did not emerge as a key factor in respondents' ability to detect follow-on in their subjects lesson-to-lesson. However, throughout Key Stage 3, high-engaged pupils saw considerably more continuity in their learning over the years than their mid- and especially low-engaged contemporaries. Further, over the course of the study, the difference between high-engaged respondents and their comparative groups grew more pronounced. Each year low-engaged pupils were least likely to discern follow-on. In Year 10, for the first time, there was a conspicuous difference between them and their mid-engaged peers, suggesting perhaps the emergence of a trend whereby these low-engaged pupils were becoming marginalised.

Enjoyment year-on-year

Although there was vacillation during Key Stage 3 in pupils' level of interest in their school work (as will be discussed next), the percentages conveying their greater enjoyment of their current compared with their previous year of schooling remained constant throughout, though were never compelling. In each year's questionnaire, around 50 per cent of respondents agreed that they had enjoyed the work they had completed that year more than last year's studies. The remaining pupils either were uncertain or disagreed, though the percentage who disagreed did decline as Key Stage 3 progressed: 27 per cent in Year 8 compared with 20 per cent in Year 10.

Interest year-on-year

There was fluctuation in the levels of interest that pupils expressed in their schoolwork over the three years of the study. As Table 4.3 shows, in Year 8 respondents were most interested in their school work compared with the previous year, with only 17 per cent of pupils agreeing that they had been more interested in their work in Year 7 than in Year 8, and 60 per cent disagreeing. In Year 9, pupils were much more divided about the year in which they were more interested in their work: 31 per cent of pupils agreed that they had been more interested in their work in Year 8, and 47 per cent disagreed. No doubt, by Year 9, the novelty of post-primary school that helped render Year 8 more interesting than Year 7 was diminishing. However, because pupils' interest in their work picked up in Year 10, this decline in Year 9 may indicate a particular problem with that year of schooling.

These are pupils' own comparisons of their feelings towards their current and previous year of schooling. In Year 9, one-third registered that they had been

more interested in their work last school year. Given the impact that this could have on these pupils' motivation and attitude to learning, amendment of the Year 9 curriculum and its mediation may be necessary in order to sustain and even enhance the level of interest which pupils felt for their school work in Year 8. As Sharp (1998) suggested, it may be that this year needs more of a focus. Whilst Year 8 has all the novelty of a new school and curriculum organisation, and Year 10 has the Key Stage 3 tests and options procedure, Year 9 lacks a distinguishing feature.

It appeared that this Year 9 downturn had a greater and more lasting impact on grammar school pupils. In Year 8, type of school made no conspicuous difference to pupils' interest in their school work, yet in Year 9 a more substantial minority of grammar school respondents (36 per cent) than their secondary peers (28 per cent) agreed that they had been more interested in their school work in Year 8 than in their current year. In Year 10, although for both school types there was an upturn in the proportion of pupils expressing greater interest in their work that school year, grammar school respondents made a smaller improvement than their secondary school contemporaries, a similar proportion of whom acknowledged their interest in their Year 10 school work as they had in their Year 8 studies.

This Year 9 downturn was also experienced most dramatically by low-engaged pupils. Whilst the data for each engagement group mirrored the overall trend on this item – the proportion registering interest in school work declining in Year 9 and improving in Year 10 – the percentage of low-engaged pupils still fell more steeply (by 20 per cent) than both mid- and high-engaged respondents (by nine and eight per cent respectively). In fact, in Year 9 a higher percentage of low-engaged youngsters (46 per cent) agreed than disagreed (31 per cent) that they had been more interested in their work last school year than this year: the only time in response to this whole item, that the largest percentage of pupils had not favoured their current year. Further, there was evidence that the Year 9 downturn was a body blow for low-engaged pupils, but a mere blip for their high-engaged counterparts. In Year 10, these were the only pupils to regain all ground lost in Year 9 and to express interest in their school work in the same proportions as they had in Year 8. Thus, there was the suggestion that high-engaged children were better able to withstand a less stimulating school year than their low-engaged and also mid-engaged peers.

The responses of low-engaged pupils to other statements in this item revealed their further dissatisfaction with school in Year 9. This possibly offers some indication of the impact the Year 9 downturn had on their perceptions of the curriculum and might even offer some explanation for it. In Year 8, there was no notable difference between the engagement groups, but in Year 9:

- far fewer low-engaged pupils (59 per cent) felt that the previous year had prepared them well for their current year compared with their high-engaged peers (80 per cent) and also their mid-engaged counterparts (71 per cent);

- low-engaged pupils were less likely to repudiate the notion that Year 9 had simply repeated Year 8 work: about half of these youngsters, but two-thirds of their high-engaged contemporaries, demurred; and

- fewer low-engaged pupils (61 per cent) felt they had learnt more during that year than in Year 8 compared with high-engaged pupils (72 per cent).

The pattern of these results was replicated in Year 10. How far these perceptions of low-engaged pupils were a symptom or a cause of their dissatisfaction is open to debate.

Transfer to post-primary school

There was a warning in these data that pupils' transfer to certain types of post-primary school proved particularly stressful. In Year 8, those youngsters attending grammar schools or single-sex schools – especially all-girls' or large schools – were all markedly less likely than their comparative groups to have enjoyed their first year at post-primary school more than their last year at primary school. There was, therefore, intimation that pupils initially felt discomfort in large post-primary schools, and dislike of the single-sex, particularly all-female, environment. Grammar school life was also less palatable, though in Year 8 this result may have been as much of a reflection of pupils' feelings of deflation and dysphoria after the demanding routine in their last years of primary school, as it was an indication of their dissatisfaction with the atmosphere and styles of curriculum mediation in these schools. There was some acclimatisation for these pupils because, later in Key Stage 3, they drew closer to their comparative groups. Yet, for all, except those attending single-sex girls' schools, some difference remained, perhaps highlighting pupils' continuing comparative dissatisfaction with these schools or the lasting legacy of their first impression. In Year 8, pupils in Catholic-managed schools registered less enjoyment of their first year of post-primary school than those in Protestant-managed institutions, though this may be explained by the fact that 14 of the 17 single-sex schools in the sample were Catholic-managed.

It also emerged that low-attaining pupils felt least well prepared for the work at their post-primary school. In Year 8, there was a small but notable difference between the proportion of low attainers (64 per cent) and high attainers (73 per cent) who agreed that their work in primary school had prepared them well for all their studies in the first year of Key Stage 3. However, this did not appear to diminish their enthusiasm for their post-primary experience, as low attainers (58 per cent) were markedly more likely than their high-attaining contemporaries (45 per cent) to have enjoyed Year 8 more than Year 7.

4.6   Curriculum as internalised

Focusing on the implications of their curricular experiences for learning, this section begins with a discussion of pupils' evaluative comments on follow-on derived from the interviews conducted in the case-study schools. Following this is a brief summary of pupils' perceptions of their own personal progress, and finally the learners' perspective on the helpfulness of methods of assessment and their experience of the Key Stage 3 tests is presented.

4.6.1   Pupils' perceptions of the value of continuity and progression

Interviewees in the case-study schools were asked to evaluate the follow-on in their subjects. These were the main viewpoints expressed:

♦   follow-on meant that more was learnt;

♦   it helped pupils to remember more;

♦   it was enjoyable only if the subject matter was liked; and

♦   it was boring.

The previous section on the curriculum as experienced documented pupils' various interpretations of continuity and progression and introduced the 'Continuum of

Perceived Follow-on' which classified their responses under the three categories of 'extraneous procession', 'clustering' and 'incremental acquisition'. It was acknowledged that as the survey data had found an association between attainment and the amount of follow-on perceived, the Continuum revealed a link between attainment and the type of follow-on seen.

The type of follow-on pupils perceived was seen to mirror their evaluation. Thus, high-attaining pupils were most likely to volunteer that follow-on aided their understanding of the subject matter under study. Their explanations implied a recognition that they were active in the learning process: '*I actually like it being a follow-on because it sort of helps you understand things more and you can do more with it*' (female, high attainer, Year 8). In contrast, for mid-attaining pupils (particularly in Year 8) and low attainers, follow-on was beneficial because '*you know more*'. Like the nature of clustering (the type of continuity they discerned), for these pupils follow-on was swelling the amorphous mass of their knowledge: '*You know more, like if you stopped you wouldn't know as much as you did the next week, because then you would know it all*' (female, mid-attaining pupil). Further proof of the different internalisations of high-, mid- and low-attaining pupils was evident in their descriptions of what ensued if lessons did not follow on: high attainers were most likely to articulate that they would feel '*lost*' or '*confused*', therefore suggesting the derailment of their understanding, whilst their low-attaining peers were more inclined to say they would '*forget*', i.e. reducing their knowledge.

Earlier analyses also revealed that pupils operated on different time spans in terms of how they perceived the curriculum hanging together over time. This influenced their perceptions of when '*follow-on*' equalled '*boring*'. For high attainers, follow-on became boring when a subject area lasted '*too long*', meaning '*weeks*', while for some low attainers and a clutch of mid-attaining pupils, follow-on was boring if it lasted longer than a day: '*You get bored with it if you are working on it for more than one lesson*' (female, low attainer, Year 9). Indeed, some of the lowest attainers in the sample were inclined to favour lessons which did not follow-on because '*I'd rather do something new*'; for them follow-on did not mean progression, but rather amounted to '*the same thing*'. Therefore, whilst high attainers' articulation suggested that they were advantaged and empowered by their capacity to detect progression in their learning, the discourse of some of their low-attaining peers at times suggested incomprehension of the unfolding of the curriculum.

As an aside, low-attaining interviewees' evaluation of follow-on perhaps also revealed something of their feelings on their ability to cope in school. At times, a fear of failure and exposure were implicit in their comments. Remember that for these pupils, follow-on operated on a day-to-day time span and was often 'task-oriented'. It was said that when lessons followed on it was '*easier*' because '... *there's not that much work to it*' and '... *it gives you lots of time to work on it* (the task in hand)'. Equally, follow-on could prevent pupils' embarrassment in front of the class and the teacher '*because if the teacher might ask you and if it didn't follow on, then you wouldn't know it, but if it did, you would know it*' (female, low attainer, Year 8). Further, an RE lesson which followed on from learning in primary school gave one very low-attaining boy a rare moment of glory in Year 8: '*It [follow-on] makes me feel good because once I was doing about the Cross in RE and I was the fastest doing it because I had already done it.*'

4.6.2 Progress

In the annual questionnaire, pupils were asked to rate on a five-point scale the extent to which they felt they had progressed in each of their subjects over the course of their current school year. Table 4.4 shows their responses in each year of Key Stage 3, ranked according to the Year 10 order.

Table 4.4   **Pupils' perceptions of personal progress by year group**

1 = I've made poor progress in this subject; 5 = I've made good progress in this subject (i.e. the higher the mean, the greater pupils' perceived progress)

Subject	Year 8 Overall mean	Year 9 Overall mean	Year 10 Overall mean
PE	4.1	4.0	4.0
IT	4.1	4.0	3.9
Health education	3.8	3.6	3.7
English	3.7	3.6	3.7
Geography	3.6	3.6	3.7
Maths	3.8	3.6	3.6
History	3.7	3.5	3.6
Technology	3.7	3.6	3.6
Art	3.8	3.7	3.5
Home economics	3.8	3.6	3.5
Science	3.7	3.5	3.5
RE	3.6	3.5	3.5
Irish	3.6	3.6	3.5
French	3.7	3.5	3.3
Music	3.6	3.4	3.2
Overall mean	*3.8*	*3.6*	*3.6*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

Given this chapter's principal focus is on pupils' perception of continuity and progression, it is worth considering whether there is any positive association between youngsters' capacity to perceive follow-on and their sense of personal progress in a subject. A comparison of the results presented in Table 4.4 and those of pupils' views of follow-on would suggest that this is not the case.

- Pupils rated their progress in all subjects positively, but especially so in PE, the subject in which they discerned the least degree of follow-on.

- In Year 9, there was a fall in pupils' opinion of the amount of progress made in their subjects. By contrast, in Year 9 (and again in Year 10), there was an increase in the level of continuity they observed in their lessons.

- A disaggregation of the results by level of attainment revealed, apart from Year 8 when high attainers did rate their progress more highly, there was no conspicuous difference in the perceptions of progress by the different attainment groups (overall mean scores for Year 8 – low: 3.6, mid: 3.7, high: 3.9; Year 9 – low: 3.6; mid: 3.6 high: 3.6; Year 10 – low: 3.5, mid: 3.6, high: 3.6). Throughout this chapter, the impact of level of attainment on the amount and type of follow-on pupils' perceived has been evidenced.

At the most basic level of analysis, therefore, there was some intimation that a capacity to see curriculum continuity did not equate with a feeling of progress.

4.6.3 Assessment

Helpfulness of methods of assessment

In the Year 8 and 9 pupil questionnaires, respondents were asked to rate how helpful they deemed various methods of assessment. The youngsters could identify the assessment methods as 'not helpful', 'fairly helpful' or 'very helpful', or could indicate that they had had no experience of a particular method that year by circling 'not used'. The results for Year 8 are presented in Table 4.5, and those for Year 9 are shown in Table 4.6.

Table 4.5   Pupils' perceptions of the helpfulness of assessment methods: Year 8 responses

Method of Assessment	Very helpful %	Fairly helpful %	Not helpful %	Not used %	No response %
Examinations	67	27	5	1	1
Reports	67	25	5	1	2
Tests	49	40	8	2	2
Teachers' written comments	44	41	11	2	2
Teachers' oral comments	47	40	11	2	1
Marks on work	61	34	4	1	1
Pupils' self-review	45	37	11	5	1

Base: *2,694*

Source: *NIC Cohort Study: Year 8 Pupil Survey*

Table 4.6   Pupils' perceptions of the helpfulness of assessment methods: Year 9 responses

Method of Assessment	Very helpful %	Fairly helpful %	Not helpful %	Not used %	No response %
Examinations	58	34	7	1	0
Reports	62	28	8	1	1
Tests (at the end of units)	48	40	9	3	1
Teachers' written comments	39	43	15	3	1
Teachers' oral comments	42	41	14	3	1
Marks on work	57	38	5	1	0
Pupils' self-review	39	38	15	8	1

Base: *2,605*

Source: *NIC Cohort Study: Year 9 Pupil Survey*

Perhaps most noticeable about the above results is pupils' generally positive appraisal of these methods of assessment. The figures for both years show that the vast majority of respondents found each method either 'fairly' or 'very' helpful in terms of providing information on progress.

In ranking the methods of assessment by the percentage of pupils who deemed each method 'very helpful', in Year 8, examinations and reports shared the top position, though in Year 9, reports were slightly ahead of examinations. Both years, marks on work very closely followed reports and exams; then, in descending order, came tests, teachers' oral comments, self-review and teachers' written comments (in Year 9 these last two methods were equal). Asked in a separate

question to specify the most helpful assessment method of all, both years, examinations were chosen most readily followed by reports then tests (joint with teachers' oral comments in Year 8).

Replicating the findings of the Pilot Study, the above results illustrate that the majority of pupils consider examinations and reports to be the most effective means of identifying their progress and attainment. This further substantiates the Pilot Report's observation that although conventional wisdom suggests examinations to be anathema to children, pupils clearly valued this form of assessment. This was further ratified by the comments of the case-study pupils in interviews. These youngsters spoke mainly about 'tests' as opposed to 'exams' because they were asked specifically to think about the forms of assessment they had experienced during that term and their interviews were conducted in December and March, so never taking in the summer exam period. However, because tests are similar to exams, albeit more frequent and less formal, their comments throw some illumination on why these forms of assessment were considered pre-eminent. Save one or two pupils who each year bemoaned the pressure which accompanied examinations and tests, interviewees were almost unanimous that these were useful means of identifying progress because they provided a clear-cut indication of how an individual was performing: '*It shows how you are coming along, if you are coming along good or bad, so it will tell you and you can try to keep your standards up*' (female, Year 9). Exams also showed pupils what they did and did not know, highlighting whether more concentration or help was needed: '*You know you need to work harder in this part or you don't need to work as hard in this part, like*' (female, Year 8); '*It tells you if you are doing good or bad or not in that subject, and if you are doing not so well, you can get help*' (male, Year 9).

Returning to the survey results, a comparison of responses over the two years reveals that in Year 9, pupils tended to circle 'fairly helpful' more often and 'very helpful' slightly less frequently than in Year 8. In fact, the percentage of pupils using this latter description fell for every assessment method by up to nine per cent. The percentage of youngsters who circled 'not helpful' rose by between one and four per cent for each assessment method. Whether pupils' slightly less positive appraisals in Year 9 were in any way a reflection of their general apathy that year is open to debate.

Key Stage 3 tests

In the Year 10 pupil survey, the item on assessment was replaced with questions seeking respondents' perceptions of the Key Stage 3 tests.

The Year 7 report (Harland *et al.*, 1999a) described the '*major backwash effect*' of the Transfer Test on the nature of pupils' whole curriculum learning during Years 6 and 7. Its existence was said by Year 7 teachers and primary principals to '*distort everything*' in upper Key Stage 2 and to have a '*most traumatic*' impact on pupils. Just as assessment heralds the start of Key Stage 3 in the form of the Transfer Procedure, assessment signifies its end with the standard tests in Year 10. In the Year 10 pupil questionnaire, respondents were asked whether they felt these tests had had any impact on their time, both at and outside school, during that year. The vast majority of pupils signalled that the tests had such effects:

- 70 per cent of pupils said that the Key Stage 3 tests had made a difference to their lives and work at school during Year 10; and

- 61 per cent of respondents affirmed that the Key Stage 3 tests made a difference to their lives outside school during Year 10.

A breakdown of the results by background variables highlighted the pupil and school types who were more inclined to feel the effects of these tests. Pupils' level of attainment and their gender emerged as key factors, and type, gender and size of school also appeared influential:

- Mid- (73 per cent) and, especially, high-attaining pupils (78 per cent) were considerably more likely than their low-attaining peers (56 per cent) to think that the Key Stage 3 tests had made a difference to their lives at school during Year 10. Accordingly, disaggregation by type of school revealed that this opinion was also held by three-quarters of grammar school pupils, but by two-thirds of their secondary-educated peers.

- Substantially more girls (77 per cent) than boys (60 per cent) felt that the tests had affected their school lives.

- Mirroring this, a larger proportion of respondents from single-sex girls' schools (80 per cent) stated thus than their counterparts in single-sex boys' (68 per cent) or mixed institutions (65 per cent).

Similarly, in terms of those pupil types who found that the Key Stage 3 tests had impacted on their lives outside school during Year 10, an analysis showed that again it was high attainers, grammar school pupils, girls and those educated in an all-female environment who felt this most keenly.

Respondents who stated that the Key Stage 3 tests had made a difference to their lives at school during Year 10 were asked to specify why they felt this had been the case. There were two reasons which were most frequently cited: 37 per cent of pupils stated that the tests had made them learn more, and 34 per cent said that there had been more work to do. In giving their reasons, one-sixth of pupils highlighted the stress they had felt, and one-tenth referred to the pressure they had been under from their teachers. However, the impact of the tests was not always negative. As stated above, over a third of pupils felt they had learnt more, and additionally, albeit in small proportions, respondents indicated that because of the tests, they had worked harder (eight per cent); felt prepared for taking GCSE examinations (eight per cent); were now more committed to learning (five per cent) and were more aware of the importance of school (three per cent). It is noteworthy that it was secondary school pupils who were most inclined to mention these more positive outcomes of the Key Stage 3 tests, whilst their grammar school counterparts were more likely to refer to feeling stressed.

In their reasons why the tests had impacted on their lives outside school, the majority of these pupils (65 per cent) highlighted the impingement on their social lives, being unable to see their friends in the evening because of the need to study. Twenty per cent of pupils specifically mentioned having to revise at home. For a significant minority, stress was again an outcome of the tests: ten per cent of these pupils stated the tests had made them worry, and six per cent cited the pressure they faced from family and friends.

The interviews conducted with pupils in the case-study schools revealed more of the effect of Key Stage 3 tests. From their testimonies, it appeared that these assessments had a significant impact on the learner's experience of the curriculum in Year 10. The results suggest that the existence of the tests distorted continuity and progression and learning within English, maths and science, and jeopardised the manageability and breadth and balance of the whole curriculum. Additionally, pupils' perceptions of the appropriateness and relevance of their subjects were influenced.

Impact on continuity and progression and learning

As early as the autumn term in Year 10, it was evident that the Key Stage 3 tests were already affecting pupils' curriculum experience and learning. During interviews conducted that term, in their descriptions of what they had covered so far in English, maths and science, pupils from four of the five case-study schools recounted numerous incidences of '... *revising from last year and first year*', '... *doing fake Key Stage 3 tests*', and '... *doing loads of things that are on our Key Stage 3s*'. This suggests that the influence of these assessments was not solely confined to the first week of May, but pervaded the whole of Year 10. The preparation for the tests, particularly the repeat and revision of previous years' work (most acutely felt in the grammar schools), impeded continuity and progression and gave the curriculum a certain predictability: '*In physics, we've done revision: electricity, current electricity, static electricity, north and south poles, magnets, attraction, repulsion. ... We haven't learnt about the planets yet, but I think we will, because we learnt that in first year*' (female, grammar school). In terms of the impact on pupils' learning in English, maths and science, for some, revision had allowed the clarification of aspects which had previously bemused them. For others, however, there had been little learning – '*already know it all ... boring*' (low-attaining, low-engaged male) – or learning had been confined to the specifics for achieving success in the Key Stage 3 tests. These remarks were made by two high-attaining, grammar school pupils when summing up their learning in English in the autumn term of Year 10: '*I suppose I've learnt what's going to be in the English exam*' (male); '*I know how to get more marks on different questions*' (female).

It should be acknowledged that pupils, as those facing the tests, did regard the concentration on revision as '*helpful*' even if '*we didn't learn that many new things*'; and deemed the mock Key Stage 3 tests beneficial, alleviating some interviewees' feelings of anxiety over '*the real thing*'.

Impact on manageability

For high attainers particularly, the Key Stage 3 tests appeared to disturb the manageability of the curriculum during Year 10. As alluded to above, the accounts of grammar school interviewees intimated that revision for the tests started earliest in their schools. Perhaps reflecting this, Chapter 6, in explaining how pupils equated learning with learning something 'new', highlights a '*levelling off*', especially for high attainers in Year 10, in terms of degree of difficulty and workload. Closer to the assessments, however, the manageability of the curriculum for all pupils was affected, in particular because the tests examined three years' worth of work in English, maths and science (a fact which caused some pupils dismay). Corroborating the questionnaire findings, three-quarters of interviewees reported spending more time than usual on homework and revision in the weeks preceding the tests, to the detriment of their social lives, hobbies and, for high-engaged girls, a good night's rest: '*I had to stay in, couldn't go to the snooker club or couldn't go to the swimming pool because I had to do revision*' (male, secondary); '*I didn't really go out ... I would sit and revise at the weekend, I wouldn't really go out with my friends*' (female, secondary); '*I sat up really late at night and then* [next day] *I wasn't awake until the end of the morning*' (female, secondary). Only low-engaged boys and two high attainers who were unconvinced of the purpose of the tests denied any increase in the amount of time they had spent studying at home, or any increase in anxiety in the weeks preceding the tests. Most pupils did admit to feeling '*a bit nervous*' before the tests, and a clutch of high-engaged girls did appear genuinely distressed by the pressure wrought by the tests:

I didn't do anything. I was in the house all the time, which I think was a bit harsh for someone who is only 13 ... because I am still quite young to have that much pressure put on me (female, grammar).

I was so nervous. ... There was so much pressure, because every single teacher thinks that their subject is important ... and was putting emphasis on theirs. So the workload was unbelievable, because you were trying to keep up with everything else and revise for the Key Stage 3s ... which was three years of work. ... There was just unbelievable pressure. I just could not find the time. You were always being told whenever employers are looking for things, they are not just looking for academic things, you need to keep up other activities. ... So I was trying to cope with those and revise ... the pressure, I just couldn't handle it (female, grammar).

The senior managers interviewed in Year 10, whilst recognising that pupils were '*under some strain*', felt this was '*certainly not the sort of pressure that the Transfer exam poses on children*' and felt that the vast majority took the test '*in their stride*' (head of year).

Impact on breadth and balance

There was evidence that the Key Stage 3 tests threatened the breadth and balance of the whole curriculum by imposing on the homework and lesson time of non-test subjects. In three of the case-study schools (two secondaries and one grammar), pupils reported a decrease in the amount of homework they received for these subjects in the weeks preceding the assessments. In the grammar school, pupils alleged that '*the school*' had specifically asked the teachers of non-test subjects '*not to give us homework, but to let all the third year students just have that time to revise before the exams*' (female). Interviewees from this grammar school and from one of the secondaries also recalled that they had been allowed to revise for the tests in the lesson time of non-test subjects: '*... we could take a class to do revision ... Coming up to last week, a lot of teachers were ... saying "Take this class" – say in French – "to do some revision"*' (male, secondary). Whilst pupils welcomed these opportunities for revision, nevertheless the breadth and balance of the NIC were inevitably distorted. In their organisation of their homework time, pupils gave priority to the three tested subjects, describing how they would '*try to get away with doing as little as possible*' in their homework for other subjects, but conversely would '*make sure everything was totally right*' in their homework and revision for English, maths and science.

Impact on appropriateness and relevance

Although pupils appreciated the value of Key Stage 3 test subjects, especially maths and English, in Year 10 over a quarter of interviewees identified material covered in English, maths and science as 'most important' or 'most useful' specifically because it would benefit them in the tests:

Interviewer: *Thinking about all the things that you have done this term, what do you think have been the most important things that you have learnt?*

Interviewee: *Probably in maths, all the things that we have learnt because it's going towards the Key Stage 3s. And English probably, because we are doing comprehensions at the minute and we need to know them for Key Stage 3* (female, grammar).

This kind of attitude was anticipated and feared by senior managers interviewed:

If they are testing those three subjects, it is sending a message to pupils that those are the ones that matter. I am not sure I necessarily agree with that (Vice Principal).

Because they are doing English, maths and science, the children perceive that 'these are the important subjects'. ... They probably see them as more important than languages, technology, art, whatever. None of them have the exam, so they are of less importance (head of year).

A grammar school boy confirmed these suspicions, when he identified English, maths and science as most useful, explaining that '... *the subjects that you are not doing an exam in you would probably tend not to think as highly of*'.

It should be noted, however, that five high attainers, including all three high attainers interviewed in a non-selective school which encouraged pupils to voice their own opinions, confided that they '*couldn't see the point*' of the Key Stage 3 tests: '*I know that it's a public exam and everything, but they just don't seem important. It's not as if whenever I am going for a job, they are going to ask me what I got in my Key Stage 3s*' (female, secondary). Another girl echoed the views of a Vice Principal when she questioned the validity of a system which based its assessment solely on examinations:

I don't think exams should be the only way to test your learning, because there are people who just get really nervous about their exams and mess it up completely, and then they have got a bad grade, but they could be really bright and have a lot of potential at the same time (female, secondary).

Highlighted above has been the impact of the Key Stage 3 tests on the NIC: the focus on revision to the detriment of new work and, therefore, in pupils' minds, learning; the increase in their workload; the lesson and homework time of non-test subjects forsaken; the importance pupils attached to '*long words*', '*the Periodic Table*' or '*decimals*' simply because of their use for, or appearance in, the test papers. This is perhaps the inevitable outcome of public examinations, as schools, most understandably, prepare their pupils for the tests. A key issue to consider might be, therefore, whether the benefits of the tests justify the adverse effects to the progression, balance, manageability and relevance of the Year 10 curriculum.

That said, however, to fully debate the role of formal assessment, it should be borne in mind that this and other chapters in this report have speculated that the tests (along with the options process) were the antidote which, by providing a clear focal point for their learning, remedied in Year 10 the disengagement from the curriculum which beset some pupils in Year 9. Indeed, this hypothesis was verified by interviewees' comments: a grammar school boy confessed that whilst Year 9 had been a '*joke*', in Year 10, '... *you have to be more focused with the Key Stage 3 exams coming up*' (male, grammar). Furthermore, in the questionnaire, the most commonly given reason by pupils who felt that the tests had affected their lives and work at school was that the assessments had made them learn more.

Therefore, it appears that pupils' motivation and learning were enhanced in a year when the progression, balance, manageability and relevance of the curriculum were disturbed. A similar scenario was also described in Year 7: as well as stressing

the most damaging impact of the Transfer procedure on the upper Key Stage 2 curriculum and also on pupils' wellbeing, a number of Year 7 teachers did state the Test kept youngsters '*on their toes*' in the final year of primary school. This perhaps raises some fundamental questions for curriculum designers regarding the role of formal assessment in the NIC. Firstly, is it appropriate that pupils appear to be motivated by assessment and see more purpose in education when it has a test at the end of it? Secondly, to what extent has the current assessment system been responsible for developing these highly instrumental attitudes in pupils? Thirdly, can teachers and curriculum designers mount a curriculum where the subject matter and skills intrinsically motivate pupils rather than the extrinsic drive towards assessment?

4.7 Conclusion and implications

A dichotomy emerged whereby continuity and progression were planned but not made explicit to pupils in the classroom. Teachers maintained that within a Key Stage the NIC provided a framework within which they could develop the internal coherence of their subjects. The analysis showed that continuity and progression operated on several different levels as teachers built them over the time period in which a particular theme/project was covered, and also established continuity and progression that developed previous work and provided a foundation for future learning. However, despite this planning, an examination of the observations conducted in the case-study schools showed that continuity and progression, whilst often implicit in lessons, were not specifically stated or made clear to pupils. Since this – the mediation of the lesson – was the arena of pupils' experience, it may be that the lack of explicit reference to continuity and progression accounted for many pupils' various and at times simplistic perceptions of a subject's internal coherence, which the 'Continuum of Perceived Follow-on' illustrated. There may, therefore, be a need for a focus on pedagogies that make the internal coherence of subjects explicit to pupils so that they can more accurately appreciate the aims of, and progression in, their learning.

The findings of the annual pupil survey suggested an association between pupils' attainment and the amount of follow-on discerned in subjects (with high attainers perceiving more). In the case-study data, there appeared to be a link between attainment and the type of follow-on seen, with high-attaining interviewees giving the most sophisticated interpretations. This leads to the question:

Are these children high attainers partly because they can see the most continuity and progression?

Or

Can these children see the most continuity and progression because they are high attainers?

Obviously, this is an extremely complex question to fathom, but it may be worth considering the following evidence:

◆ It emerged that the three of the four pupils who most consistently defined follow-on as 'application' (the pinnacle of the 'Continuum of Perceived Follow-on') were described as 'average' by their Year 7 teachers, but were high attainers by the end of Year 10. Was this a factor in their improved attainment?

◆   When making evaluative comment on follow-on, high attainers were most likely to state that 'follow-on' aided their understanding, whereas as mid-, and especially low-attaining pupils, were more inclined to remark that 'follow-on' meant '*you know more*'. Does this suggest that the quality of insights into the benefits of continuity and progression aids incremental learning and understanding?

◆   In their evaluation of follow-on, low attainers were inclined to state how they preferred to '*move on*' to a new area rather than 'follow on', which was '*boring*' and amounted to learning '*the same thing*'. Could there be any link between their poorer perception of follow-on and disaffection with the curriculum?

◆   Seeing continuity and progression might, in reality, mean children are making progress, but it does not necessarily mean that they feel they are making progress. A disaggregation of the results by level of attainment revealed, apart from Year 8, there was no conspicuous difference in the perceptions of progress in the three attainment groups.

Further Recommendations

◆   A reconsideration of the Year 9 curriculum: an item that was included in the annual pupil survey asked respondents to compare their current year of schooling with the previous year. It was evident that pupils' levels of enjoyment and interest nosedived in Year 9 compared with Year 8, only to recover in Year 10. If pupils themselves are aware of their lesser engagement with one school year, what is the impact of this on their level of motivation?

◆   A review of the Key Stage 3 tests: an impact similar to that of the Transfer Procedure on Year 7 was apparent as the evidence suggested that the continuity and progression, balance and manageability of the Year 10 curriculum were jeopardised by the existence of public assessment in English, maths and science. There was an indication that pupils' motivation had increased as a result of the Tests, but this short-term, last-minute benefit may not sufficiently compensate for the disturbance to NIC and for the creation of a situation whereby assessment becomes pupils' main driving force.

5. RELEVANCE AND APPROPRIATENESS

5.1 Introduction

According to Lord and Harland (2000), relevance and appropriateness have, after values in education, been the '*most frequently occurring topic of research pertaining to pupil experiences and perspectives on the curriculum*' (p.41). Researchers have investigated pupils' views on the importance of subjects (e.g. Stables and Wikeley, 1997; John and Thomas, 1997), and their relevance, both to current educational needs (e.g. Harland *et al.*, 1999b; Ingram, 1992; Garner, 1993), and to careers (Harland *et al.*, op. cit.; Francis and Greer, 1999; Woodward and Woodward, 1998). The majority of studies, however, have examined specific subject relevance, or current importance, rather than the relevance of the whole curriculum, as in the case of the cohort study.

The present research sought pupils' views on relevance to current (not specifically educational) needs, to life in the future, to careers, and also their views on gender relevance. Lord and Harland (ibid.) found that relevance in earlier research has most frequently been perceived in terms of '*relevant contexts* (relating to real-life situations)'. Given the scope of the present inquiry, 'real-life relevance' from the pupils' point of view extended along the full spectrum of pupils' experience in the present, and embraced their future aspirations both for careers and for adult life in general.

Pupil perceptions were gleaned from responses to four of the semantic differential items in the questionnaire, and from a series of questions on relevance in the interviews. The following chapter will discuss the views of pupils, supplemented as appropriate by those of teachers, in relation to the five curriculum levels (see Chapter 1).

5.2 The curriculum as specified

The NIC requires that every pupil should follow a curriculum that is '*relevant to his or her particular needs*'. It also states that each individual is entitled to a curriculum that promotes their '*spiritual, moral, cultural, intellectual and physical development*' and prepares them for '*the opportunities, responsibilities and experiences of adult life*'.

Teachers were asked first whether they thought that the subject content and skills they had taught to the year group in question during the current term were relevant and appropriate for them. They were then asked whether they felt pupils perceived them as relevant. Finally, teachers were asked whether they believed effective learning in their subject was dependent upon pupils' perception of its relevance.

Several teachers interviewed in the pilot study (Harland *et al.*, 1996) believed: '*Pupils acquire a sense of what is appropriate and relevant not, in the main, through explicit explanations by teachers, but rather through the implicit de facto*

status given to a subject by the amount of time it receives, or the extent to which it is examined or tested.' Other researchers have also suggested that subjects allocated only a small proportion of the timetable will be perceived by pupils as low-status curriculum areas (Hendley *et al.*, 1996). A number of teaching staff here acknowledged that the relevance of different subjects was implicit for pupils in the timetable, and in their assessment status. As one English teacher observed: *'I don't have to persuade them that English is important; I think they know that themselves.'*

Given the persistent importance of vocational relevance in the pupil responses, the paucity of references to it in the teacher data was striking. Pupils related the curriculum to their needs in both the present and a future that extended beyond their school career. Teachers' priorities, on the other hand, related to a much more tightly demarcated period beginning in the present and ending when pupils left school (and were thus no longer their responsibility). They tended to associate appropriateness and relevance either:

♦ with levels of **academic relevance and achievement**; or

♦ with the need to instil **real-life relevance** into the learning experience, in order to secure pupils' engagement with the task in hand.

Many teachers acknowledged the importance of real-life relevance. However, at least as many teachers interpreted relevance in an academic context. Among these, relevance was often seen in terms of manageability (i.e. whether the level of difficulty, or the sheer workload was 'appropriate' for the age and ability of a particular class). A science teacher, for example, said there were '... *a lot of units to get through'* which meant *'you don't have time to, sort of, enhance the learning experience'*.

On the whole, the majority of teacher interviewees seemed to agree that the specified curriculum was relevant for pupils according to the criteria defined above. Many teachers linked academic relevance with the sense of progression. They believed that this kind of relevance was cumulative, in that pupils gradually discerned an increasing amount of relevance as they progressed through the Key Stage, building on what they had learnt and applying it in a developing range of contexts. A Year 9 maths teacher commented: '... *when they progress a little bit further ... they will see those skills they were learning are relevant to what they are doing, and they need to know those to solve a problem.'*

The importance of relating the learning experience to pupils' everyday lives was a recurring theme among teachers. A Year 8 French teacher regarded pets, families and sport as appropriate topics, because pupils *'can really identify with that sort of material'*. Year 9 geography content relating to agriculture and factories was seen to be appropriate because of its 'real-life relevance': *'They really enjoy doing things like that.'* A maths teacher approved of changes in the revised orders which enabled Year 9 pupils to *'apply what they have learnt'*, for example, through planning the budget for a holiday. In home economics, teachers also welcomed changes that incorporated more practical tasks.

Nevertheless, it was suggested that too frequently it could be left as the teachers' responsibility to develop resources for building real-life relevance into their subjects, by relating the content to pupils' personal experience, or by devising tasks that would engage them in an active role. According to many respondents, particularly in geography, history, and science, fitting the workload specified by

the NIC into the '*time allocation*' was often hard to reconcile with the need for relevance to real life.

In certain subjects, the intrinsic nature of particular topics was seen to be inappropriate in this respect:

- **History** – one teacher questioned '*the wisdom of having a topic like the Normans ... events that happened a thousand years ago*' in the Year 8 curriculum. In his experience, '*... even Year 8 pupils want to find out about the twentieth century ... wars ... something that interests and excites them*'. His observations were roundly supported by the marked lack of enthusiasm for history, events '*years ago*', in the pupil data.

- **Music** – pupils found music consistently the least relevant of all subjects. Bearing in mind their alleged indifference to '*things in the past*' in history, a possible explanation from a music teacher may be pertinent here. She pointed out that the majority of young people were '*interested in chart music ... in their own types of what they want to listen to ...*'. To make music relevant in school, she recommended using their interest in contemporary music as a starting point, and '*just sort of broadening their knowledge*'.

Many teachers were aware of an association in pupils' minds between relevant learning and learning something '*new*':

- **French** – a modern languages teacher noted the importance of the novelty value of learning a totally new subject in Year 8, and the positive effect on self-esteem of the subsequent sense of achievement.

- **Geography** – the overlap between geography and science in certain topics (see Chapter 3) was seen to cause problems when pupils felt the repetition was irrelevant because the learning was not '*new*'. The solar system, for example, was covered '*in detail*' in science, and pupils were reported to have asked '*what's the point?*' of subsequent recapitulation.

- **Irish** – in the case of Irish, teachers could be faced with stubborn resistance from pupils who found the whole subject completely pointless: '*It depends on the pupils ... some of them don't want to do anything ... you just have to put up with that you know.*' The limited relevance of Irish, particularly in grammar schools, was evident from both the survey and the interview responses.

In terms of their own views of the relevance of the curriculum as specified, many teachers expressed a personal and professional recognition of the pleasure of learning for its own sake, and the value of offering a range of perspectives on the content of a lesson. Many also registered awareness of the need to bolster pupils' self-esteem, although this was frequently related to academic opportunities. As noted earlier, the lack of reference to vocational relevance in teachers' discourse was striking. On the whole, from their emphasis on academic achievement and real-life relevance, their responses gave the impression that they frequently had no option but to uphold a strictly directed and utilitarian approach to relevance in order to secure pupils' engagement and, thereby, to promote academic achievement.

Given the adoption of a largely academic and utilitarian approach to relevance by teachers, it may perhaps not seem surprising that many pupils, whatever the approach to education at home, appeared to have imbibed similar priorities and values.

5.3   Curriculum as planned

The 'implicit' relevance for pupils of any subject, according to its status in the timetable and the arrangements for assessment, was referred to earlier. Accordingly, most teachers understood only too well the implications of whole-curriculum planning for their subjects in this respect.

In both the pupil and the teacher data, assessment emerged as a powerful source of motivation, strong enough to override perceptions of relevance or 'irrelevance' to real life. A history teacher noted that, in spite of their lack of interest, Year 8 pupils would *'revise for a test dutifully'*; a drama teacher affirmed that, although her Year 9 pupils had enjoyed working on a modern play because they found it relevant, they *'wouldn't necessarily see drama as an important subject ... because it is not examined'*.

None the less, teachers across a range of subjects described how 'real-life relevance' was deliberately incorporated into the planning of schemes of work. Many departments would *'choose the timing when we do particular topics that we feel are relevant to them'*. A home economics teacher noted that schemes of work could vary from year to year, and were *'constantly being readapted'*. An Irish teacher referred to the beneficial effects, for the few individuals involved, of a residential opportunity available in his school throughout Key Stage 3, where pupils took part in a variety of Irish cultural activities. The importance of field trips was emphasised by a Year 9 geography teacher: *'There's no substitute for going out and getting first-hand experience. No number of textbooks or amount of talking you can do can substitute that.'* A teacher of Year 7 regretted his inability to enliven a topic on the Middle Ages, by organising a visit to a nearby castle. Unfortunately, heavy workloads imposed by curriculum requirements, or a lack of resources, could preclude the possibility of these events.

5.4   The curriculum as mediated

From the classroom observations compiled from the pupil pursuits, it was clear that individual teaching staff regarded it as a professional responsibility to imbue the learning experience with whatever relevance seemed most appropriate in the context. An English teacher concluded, *'the whole crux of it lies with what the teacher does with the recommendations of the syllabus'*. The mediation of relevance appeared to depend on the professional inclinations of the individuals concerned. In mediation, relevance could be very explicit:

- **academic relevance**: *'the exams are coming up so we need to go through ...'* (history). For teachers, academic relevance appeared to be closely associated with **academic attainment**, earning good marks in general, or in relation to specific assessments, such as the Key Stage 3 tests. As will be seen later, for pupils academic relevance also referred to **curriculum proficiency**, mastering a challenge, enhancing understanding or improving skills *per se*, for the sheer satisfaction of doing so;

- **real-life relevance**: *'why are we concentrating on your neck?'* (PE *'warm-ups'*).

Relevance could also be implicit. Academic relevance, as teachers generally acknowledged, is implicit in the timetable in the allocation awarded to respective

subjects. Real-life relevance could be deliberately implicit. According to both the interviews and the observations, teachers deployed a range of strategies intended to engage pupils in lessons through an element of real-life relevance:

- in the **content**
    - an English lesson on speaking and listening skills used television 'soaps' as a means of encouraging pupils to take part;
    - a geography teacher discussing aid to developing countries referred to '*waste*' in the school canteen as an example of waste in '*developed*' countries;

- in the nature of the **task**
    - a science lesson involved pupils in making their own electric circuits;
    - a French lesson included a game with actions;

- in the nature of the **resources**:
    - during a maths lessons, pupils were using '*cereal packets labelled as cuboids*';
    - a geography teacher explained that '*we tend very often to use videos, audio-visual material ... to try and make those bits more interesting for them*'.

According to pupils, the skilful use of such strategies could be very successful in terms of engaging their interest. However, unless they were convinced that they would '*need*' the learning experience, the perception of such real-life relevance did not necessarily ensure that they believed the learning was of lasting importance.

The preceding three sections have outlined teachers' views on the relevance of the curriculum for pupils, and indicated some of the strategies they employ in the classroom to make their subjects more appealing in this respect. The following two sections will investigate the pupil perspective, as it emerged from the survey and the interview data.

5.5   The curriculum as experienced

Both the interviews and the questionnaire sought pupils' views on the experience of relevance and appropriateness in the curriculum. Here, the questionnaire findings will be considered first, followed by a discussion of the interview responses, which will highlight any differences and similarities between the two sources of data.

5.5.1   Pupil perspectives from the questionnaires

Item 2 of the questionnaire included four pairs of antonyms that were intended to address the following areas for each of the pupils' subjects: relevance to current needs, importance for adult life, importance for a job or a career, and gender relevance. The findings for each aspect of relevance are presented in turn below.

Pupil perceptions of relevance to current needs (synchronic relevance)

In the questionnaire, the Item 2 categories 'useful for me now ... useless for me now' attempted to examine pupils' sense of current or synchronic relevance, in either its 'real-life' or academic contexts. The following table presents the overall mean scores for Item 2 for each year group for each subject, in rank order for Year 10, together with the mean scores disaggregated by type of school. The table is followed by a discussion of the main findings, which draws attention to differences and similarities in relation to the key variables, type of school, attainment grouping and gender of respondent.

Table 5.1 Pupils' perceptions of relevance to current needs (synchronic relevance) by type of school and year group

1 = useful for me now; 5 = useless for me now
(i.e. the lower the mean, the greater its perceived relevance to current needs)

Subject	Year 8			Year 9			Year 10		
	Overall mean	Sec. mean	Gram. mean	Overall mean	Sec. mean	Gram. mean	Overall mean	Sec. mean	Gram. mean
Maths	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	2.1
IT	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	1.9
PE	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	1.9
Health education	2.1	2.2	1.9	2.1	2.2	2.0	2.0	2.2	2.0
English	1.8	1.8	1.9	2.0	2.0	2.1	2.1	2.1	2.3
Careers education	–	–	–	–	–	–	2.1	2.1	2.1
Home economics	2.4	2.3	2.5	2.6	2.5	2.7	2.6	2.6	2.7
Science	2.5	2.5	2.5	2.7	2.7	2.7	2.7	2.6	2.7
Geography	2.6	2.5	2.8	2.8	2.7	3.0	2.9	2.8	3.0
Technology	2.8	2.7	3.0	3.0	2.9	3.2	3.1	3.0	3.2
History	2.8	2.7	2.9	3.0	2.9	3.1	3.1	3.1	3.2
RE	2.9	2.8	3.0	3.0	3.0	3.1	3.1	3.1	3.1
French	2.8	2.7	2.9	3.0	3.0	3.2	3.2	3.1	3.3
Irish	3.0	3.1	2.9	3.1	2.9	3.3	3.2	3.0	3.3
Art	2.7	2.6	2.9	3.0	2.9	3.1	3.3	3.2	3.4
Music	3.0	2.9	3.2	3.2	3.1	3.5	3.6	3.5	3.8
Overall mean	*2.5*	*2.5*	*2.6*	*2.6*	*2.6*	*2.7*	*2.7*	*2.6*	*2.8*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

As can be seen from Table 5.1, the subjects clustered into three distinct groups. The subjects perceived to be most relevant to current needs, at the top of the table, were maths, IT, PE, English and, in Year 10, careers education. (Health education also figured highly, though the numbers taking this as a separate subject were relatively small.) The middle group contained home economics, science and geography. Science earned a surprisingly low rating, given the time allocated to it in the timetable. The largest group of subjects was the one at the bottom of the rankings, the least relevant category. The relegation of modern languages to the least relevant category may seem even more remarkable since, according to the findings from the breadth and balance analysis (see Chapter 2), a third of all schools in the sample allocated these subjects the most teaching time.

While this broad pattern can be seen to recur over the three years, Table 5.1 reveals some interesting differences in the scores between the year groups, and between grammar and secondary schools.

- The introduction of careers education in Year 10, which registered a very high score, distorted the overall mean for this year group and concealed perceptions of diminishing relevance in less valued subjects.

- Year 8 pupils seemed generally positive about the value of the curriculum for their current needs. But over the three years, most subjects declined in perceived current relevance; only two, maths and PE, stayed broadly the same, and only one, IT, increased. The major declining subjects were art (by 0.6), music (by 0.6) and French (by 0.4). Thus, in Years 9 and 10 a clear majority of subjects were seen as conspicuously less useful to current needs, especially by pupils in grammar schools.

- While in Year 8 maths and English were seen as equally useful, by Year 10 maths remained the most relevant subject of all, while English was rated fourth, below IT and PE.

- Perceptions of the relevance of French and, to a lesser extent, science, two major subjects in terms of timetable allocation, declined over the three years.

- Music was consistently the least valued subject in terms of synchronic relevance, with art dropping to nearly the same level in Year 10.

The ranking by type of school, grammar and secondary, broadly reflects the ranking for the overall mean in each year. However, while in Year 8 both sets of pupils rated only one subject as slightly less than useful (below 3.0), the results for Year 9 displayed an appreciable decline in perceptions of relevance in grammar schools: seven subjects (as opposed to only one in secondary schools) were perceived in varying degrees of 'uselessness' for pupils' current needs. Thus, by Year 9, grammar school pupils expressed a narrower view of relevance, limited to the academic core of the curriculum (English, maths, and science), along with IT, and attached much less importance to practical and aesthetic areas.

By Year 10, there was much less of a disparity between the two types of schools; relevance for secondary school pupils appeared to decline significantly in Year 10, while the perceptions of their grammar school peers remained the same in this respect. However, as in other years, grammar school pupils saw lower levels of relevance in their subjects than secondary school pupils; only in IT and PE did they see more.

While, in Years 8 and 9, maths and English were judged to be the most useful subjects in both types of school, the Year 10 scores indicated an interesting shift in grammar schools, where PE and IT were both rated above maths, and English was rated fifth below maths and careers education. Could such a change reflect a narrowing of focus in these schools, or over-exposure to English and maths?

In Years 8 and 9, responses from both types of school placed art and music among the least useful subjects. The negative responses to art and music were even more marked in grammar schools, especially so in Year 10. It is worth noting that Irish, too, was less valued by grammar school pupils. Secondary school pupils appeared to value the arts more than those in grammar schools. The almost dismissive approach to music from grammar school pupils seems to contradict the conventional wisdom that music as a school subject is valued more in middle-class and academic cultures. (Perhaps it is the 'accomplishment' derived from individual instrumental tuition that is valued in such cultures.)

The results by type of school may gather additional resonance from comparison with the scores for analysis by attainment. Again, the picture was one of declining

relevance over the Key Stage, following the same pattern as the scores for type of school, with the high attainers generally seeing less relevance in their subjects than the middle and lower groups. However, there were important differences relating to individual subjects.

- The relevance of English was perceived by all three attainment groups to diminish from Year 8 to Year 9, but markedly so for high attainers, who ranked it below maths, IT and PE. In Year 10, while this tendency continued for the low and middle groups, the score for high attainers remained the same; nevertheless, as in the case of grammar schools, with the introduction of careers education, high attainers demoted English to fifth place, regarding it as less relevant than IT, PE, careers education and maths.

- For low attainers, the relevance of art and music declined over the Key Stage to a greater degree than for the other two groups.

- Low attainers' perceptions of the relevance of IT remained the same for the three years, while those of high attainers increased.

- High attainers' perceptions of the relevance of Irish fell by 0.5 over the Key Stage, while those of low attainers improved slightly. However, this is likely to be due to the tendency for more lower-attaining pupils to drop Irish as they progressed through the Key Stage. While pupils in grammar schools continue to study this subject until Year 10, pupils in secondary schools have the option of giving it up after the first or second year. Thus, those who continue to study Irish in Year 10 in these schools are more likely to see it as relevant.

- High attainers' perceptions of the relevance of maths declined, while those of low attainers stayed the same.

- High attainers' perceptions of the relevance of RE stayed the same, while those of low attainers declined.

- Technology was found to become gradually less relevant over the three years by all three attainment groups, but this perception was most conspicuous among the high attainers. While high attainers might dismiss this subject as less relevant in terms of academic achievement and vocational opportunities, the waning of enthusiasm among the other two groups might possibly be related either to the Year 9 and Year 10 curricula in this subject, or possibly to its increasing difficulty and/or demands in terms of homework. As one technology teacher remarked, 'the theory' behind the practical activities in his subject was often difficult for low attainers to grasp.

The findings concerning maths, IT and English seem to offer a range of interpretations. Could the decline in the status of English generally, but more appreciably for high attainers and grammar school pupils, suggest the emerging pre-eminence of numeracy and, especially, computer literacy, over the Key Stage in relation to what pupils feel are their most urgent current needs? If this is the case, is this an indication of a parallel narrowing of focus towards a perception of education as a utilitarian preparation for the world of work? And, therefore, does it suggest that all pupils, and high attainers and grammar school pupils in particular, associate English primarily with the acquisition of a certain level of competence in literacy? Once they believe they have acquired the 'basic skills' associated with the use of the English language, do they feel English declines in relative importance? If this were the case, the implicit depreciation of engagement with any kind of literature, which was discernible among the interview responses, may be seen in conjunction with the generally developing perceptions of irrelevance

in art and music, as testified by the overall mean, and most forcefully expressed by high-attaining pupils and those in grammar schools.

Moreover, could these findings also reflect a burgeoning enthusiasm for IT as awareness of its potential develops (depending on the priorities of individual schools) over the three years? Or could they reflect priorities inherent in the curriculum as a whole, as conveyed to pupils explicitly and implicitly by teachers and by their experience of school?

The overall mean scores for relevance to current needs were disaggregated by gender of individual respondent in order to determine the degree to which pupils' perceptions of relevance in terms of their current needs varied according their gender.

For Years 9 and 10 particularly, analysis revealed the persistence of traditional gender stereotypes: the most extreme example was technology, which boys perceived to be considerably more useful to their current needs (a difference of 0.9) than girls. By contrast, music, home economics and French were seen to be more useful by girls. In Year 10, careers education was found to be more useful by girls, perhaps a reflection of their purported relative maturity, or possibly an indication of their greater willingness, or compliance, to engage with the task of planning for the future.

To conclude this sub-section, perhaps one of the most important findings in relation to relevance to current needs related to PE and IT. The fact that these two subjects were consistently invested with the highest levels of synchronic relevance, but were also among those with the least curriculum coverage, would seem worth noting in relation to the dissatisfaction recorded in Chapter 7, especially the declining levels of enjoyment over the Key Stage as a whole.

Pupil perceptions of relevance to the future (diachronic relevance)

In the questionnaire, the Item 2 categories '*important for adult life ... not important for adult life*' attempted to examine pupils' sense of future or diachronic relevance, in either its everyday 'real-life' or academic contexts. A separate item sought pupils' views on diachronic relevance in terms of vocational/career relevance. The following table presents the overall mean scores for each year group for each subject, in rank order for Year 10, together with the mean scores disaggregated by type of school.

The broad pattern for future relevance was similar to that for current needs, in that the same clusters of subjects appeared at the top and the bottom of the rank ordering for each year, with science and French scoring comparatively low ratings again.

Pupils in Year 8 and Year 9 appeared to find the curriculum less useful for the future than for their current needs. For Year 10 pupils, the perception appeared to be slightly the reverse. Again, differences in scores for individual subjects, between years and between types of school are worth noting.

- English and maths, with the addition of home economics in Year 8 and careers education in Year 10, were seen by all three year groups to be the most important subjects for adult life.

- The ranking of English in this respect by Year 10 pupils contrasted with the lower status they awarded it in terms of relevance to current needs, where it was ranked below IT, PE, careers education and maths.

Table 5.2   Pupils' perceptions of relevance to future needs (diachronic relevance) by type of school and year group

1 = important for adult life; 5 = not important for adult life
(i.e. the lower the mean, the greater its perceived relevance to future needs)

Subject	Year 8 Overall mean	Year 8 Sec. mean	Year 8 Gram. mean	Year 9 Overall mean	Year 9 Sec. mean	Year 9 Gram. mean	Year 10 Overall mean	Year 10 Sec. mean	Year 10 Gram. mean
English	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Maths	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.8	2.0
Careers education	–	–	–	–	–	–	1.9	2.0	1.9
IT	2.3	2.3	2.3	2.2	2.2	2.0	2.0	2.0	1.8
Home economics	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.0
Health education	2.1	2.1	2.0	2.1	2.2	2.0	2.1	2.2	2.0
PE	2.6	2.7	2.6	2.5	2.5	2.5	2.4	2.4	2.3
Science	2.7	2.8	2.7	2.8	2.8	2.8	2.6	2.6	2.7
Geography	2.7	2.6	2.8	2.8	2.7	3.0	2.8	2.7	2.8
Technology	2.8	2.7	3.0	2.9	2.8	3.0	2.9	2.9	3.0
RE	3.0	2.9	3.0	3.0	3.0	3.0	3.0	3.0	2.9
History	3.1	3.1	3.3	3.2	3.1	3.2	3.1	3.1	3.1
French	3.0	3.0	3.1	3.2	3.2	3.2	3.2	3.2	3.3
Drama	3.3	3.2	3.4	3.4	3.3	3.4	3.4	3.4	3.5
Irish	3.3	3.3	3.3	3.3	3.1	3.5	3.5	3.3	3.5
Art	3.2	3.1	3.4	3.5	3.4	3.7	3.6	3.5	3.8
Music	3.4	3.3	3.6	3.6	3.5	3.8	3.8	3.7	3.9
Overall mean	*2.7*	*2.7*	*2.8*	*2.8*	*2.7*	*2.8*	*2.7*	*2.7*	*2.7*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

• In Years 8 and 9, home economics was seen as important as maths and English. However, careers education and IT respectively superseded and equalled the status of home economics in Year 10.

• Modern languages and the creative arts (art, drama, and music) were consistently seen as the subjects least useful for the future, just as they were perceived as the least important for pupils' current needs.

• The relevance of art, and to some extent French and music, declined considerably between Year 8 and Year 9.

• As in the case of synchronic relevance, music emerged decisively as the least relevant subject for all three year groups.

Apart from Irish, art and music, diachronic relevance seems to stay the same, or increase, in Year 10, as in the case of IT. This is in contrast to synchronic relevance, which declines for most subjects over the three years.

The higher status of English in Year 10 here, compared with its demotion to fifth place in relation to current relevance, is interesting. Do pupils at this stage see more value in this subject for adult life in terms of the opportunities it provides for personal development and for practising communication skills? Do they feel they will need these aspects of English more urgently for survival in the world beyond school than for survival within it?

In Year 8, the high status of home economics suggests that pupils' interpretation of 'adult life' may often have been quite a literal one, and that physical survival was at the forefront of their minds. The relatively higher value of IT in Year 9, compared with Year 8, might reflect increasing awareness of the potential of IT derived from increasing competence. And/or it might alternatively be associated with the home economics curriculum in Year 9, and an increasing amount of written work in a subject perceived to be largely 'practical' in nature.

The consistently low rating for French, compared with other academic subjects, both here, and in terms of relevance for current needs, may reflect the view of a modern languages teacher in the pilot study, who observed that it was very hard to involve pupils 'who never go beyond Northern Ireland' in a 'constant rehearsal' for going abroad. One of the few studies of modern languages (Clark and Trafford, 1995) found that pupils believed these subjects were irrelevant to their everyday lives.

It is at least possible that the decline in the perceived relevance of art and French between Years 8 and 9 may be correlated to a similar decline in the manageability of these subjects at this stage. Thus, it might reflect Year 9 pupils' developing aversion to subjects where the appeal of practical and oral work (explicitly 'relevant' activities) is diminished by the introduction of conceptually harder content and the burden of more demanding homework assignments.

Responses for the creative arts may cause concern. Pupils appeared to imagine they would have as little importance once they left school as they assigned them for their current needs. Negative responses to music were striking. The pupils here expressed undeniable enthusiasm for IT, and their enjoyment of lessons relating to young people's interests and concerns is clearly recorded in the interviews. Perhaps a much more adventurous exploration of the possibilities of music technology, and inclusion and acceptance, in the specified curriculum, of their own preferred musical styles, might offer pupils a more relevant, more enjoyable and therefore more engaging experience of this subject at school, thus enhancing perceptions of its relevance for life in the future.

The consistently lower rating for history, compared to science, technology and the other humanities, here and in terms of relevance to current needs, may suggest that, in spite of the surge of interest for Irish history studied in Year 9 and well documented in the interviews, the majority of pupils remain to be convinced of any current or future relevance in the past or in the skills involved in its study.

As noted earlier in the cohort study (Harland *et al.*, 1999a), very few Year 7 pupils attached importance to subjects associated with their own interests. According to the interviews here, while in some instances, as in the case of pupils who said they wanted to be vets, pupils' interests seemed to coincide with vocational relevance as a priority, more frequently they dismissed individual interest and enjoyment in favour of a more general utilitarian approach.

A number of interesting differences emerged when the questionnaire results were disaggregated by type of school.

- Although, over all three years, pupils in both types of school seemed to believe that the majority of their subjects would be relevant to them for adult life, grammar school pupils were less positive about the value of certain subjects than their secondary counterparts.

- All pupils regarded modern languages and the creative arts as the least important subjects but, as in the case of relevance to current needs, the responses of the grammar school pupils were more forcefully expressed, especially concerning Irish, art and music.

- In Year 10, IT was the most important subject for adult life in grammar schools, and more important than it was for secondary school pupils.

- Maths was the most important subject for adult life according to secondary school pupils, but in grammar schools it was less important than IT, English and careers education.

The practice tests and revision involved in preparation for the Key Stage 3 maths test were, according to pupils, particularly intensive in grammar schools, where academic attainment appeared to be paramount. Could such a heavy revision schedule be accountable in any way for the above result by denying pupils the stimulation of new material to be learned? If it is assumed that pupils expect a lesson to consist of 'learning', and if, as the interview responses underlined, they frequently identify learning with learning something 'new', then they may see any learning that is not new to have little relevance or importance for them, beyond its immediate implications for assessment.

Although pupils in grammar schools still found the majority of their subjects useful for adult life in Year 10, the table demonstrates a polarisation in their perceptions of subjects' relative importance over the Key Stage. Thus, fewer subjects (IT, careers education, English, maths and home economics) are ranked at the top of the scale by Year 10, there is a considerable gap (bridged by PE) before the next academic subject (science), and history, French, drama, music and art attain lower scores than in previous years. This attenuation of the range for grammar school pupils in Year 10 may indicate that a narrowing perception of the relevance of the curriculum runs parallel to their cumulative curriculum experience.

With respect to French, this subject was consistently voted as the hardest over all three years, according to the scores for manageability (see Chapter 6). If, as the evidence suggests, it is also regarded as irrelevant by the majority of pupils, it may be generating a considerable degree of disaffection, especially since it occupies a relatively large proportion of the timetable. This may be most applicable in the case of low attainers and grammar school pupils. In both cases, according to pupils, curriculum expectations appeared to be too high and the specification to teach in the target language (so that French is the only language spoken, by both teacher and pupils, throughout the entire course of the lesson) appeared to be causing serious problems in understanding and communication.

The scores disaggregated by type of school are worth comparing with those disaggregated by attainment grouping.

- Drama, art and music registered relatively low ratings from all three attainment groups, with the highest ratings from low attainers and the most negative scores from higher attainers. During the following two years, their perceived importance for adult life continued to decline respectively among all three groups, with music maintaining its position as the least relevant for all pupils.

- While there was very little change in the technology scores for the middle and high attainers, who both saw it as fairly useful, low attainers appeared to find it becoming less important for them over the Key Stage.

- The scores for IT from high attainers in Year 10 are striking, showing a leap of 0.4 from the Year 9 scores, placing it at the top of the scale, ahead of English, maths and careers education. In this respect, they correspond with the similar enthusiasm for IT expressed by grammar school pupils in Year 10.

Analysis by religious orientation revealed that pupils in Catholic-managed schools were consistently much more positive about the relevance of RE for adult life than pupils in either Protestant-managed or Integrated schools.

With reference to gender differences, traditional gender stereotypes, in relation to certain subjects, were discernible from Year 8, but appeared to become gradually more entrenched over the next two years (as in the case of relevance to current needs):

- Boys were conspicuously enthusiastic about the importance of technology, while many girls appeared uninterested.

- While both sexes valued home economics, girls were more positive than boys about the future relevance of this subject.

- Girls were also more appreciative of RE and French (though both sexes appeared to see little value in Irish).

- In Year 10, girls' responses for PE expressed noticeably less commitment than those of the boys.

In reviewing the findings for relevance for adult life recorded here, an inescapable parallel between the scores of high attainers and grammar school pupils emerges in the ascendancy of IT, and in the narrowing range of subjects deemed to be important. Taken together, and bearing in mind a similar emphasis on utilitarian values from these groups in the scores for relevance to current needs, it seems that these two groups of pupils may already be disposed to value a relatively limited range of subjects in Year 8. By Year 10, their experience of the curriculum (and perhaps other influences outside school) may have encouraged them to see their life in the future exclusively in terms of material and vocational success, and to this end to become predominantly focused on what they believe will most effectively help to achieve them.

Pupil perceptions of vocational relevance

In the questionnaire, the Item 2 categories 'important for a job or career ... not needed for a job or career' attempted to examine pupils' sense of vocational relevance. The following table presents the overall mean scores for Item 2 for each year group for each subject, in rank order for Year 10, together with the mean scores disaggregated by type of school.

According to Table 5.3, although Year 8 pupils thought a substantial majority of their subjects were important for a career, this perception in Year 9 applied to only half of the total curriculum, a proportion which was maintained in Year 10. Moreover, pupils' perceptions of vocational irrelevance tended to be more forcefully expressed as they progressed through the Key Stage. Apart from the notable instances of IT, science and maths, vocational relevance declined for most subjects over the Key Stage, and the overall mean would have declined further in Year 10 if careers education had been excluded from the table.

Table 5.3   Pupils' perceptions of vocational relevance by type of school and year group
1 = important for job/career; 5 = not needed for job/career
(i.e. the lower the mean, the greater its perceived relevance to jobs/careers)

Subject	Year 8			Year 9			Year 10		
	Overall mean	Sec. mean	Gram. mean	Overall mean	Sec. mean	Gram. mean	Overall mean	Sec. mean	Gram. mean
English	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.6
Maths	1.5	1.5	1.5	1.4	1.4	1.4	1.5	1.4	1.5
IT	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.6
Careers education	–	–	–	–	–	–	1.7	1.8	1.7
Science	2.4	2.4	2.3	2.4	2.5	2.4	2.3	2.3	2.3
Geography	2.5	2.5	2.7	2.7	2.6	2.9	2.8	2.7	2.9
Technology	2.7	2.5	2.9	2.8	2.8	3.0	3.0	2.9	3.2
PE	2.9	2.8	3.1	3.0	2.9	3.1	3.0	2.9	3.2
History	3.0	2.9	3.1	3.1	3.0	3.2	3.2	3.2	3.2
French	2.9	2.9	3.0	3.1	3.0	3.1	3.2	3.1	3.2
Health education	2.7	2.6	3.1	2.8	2.6	3.0	3.2	2.8	3.5
Home economics	2.8	2.7	3.1	3.0	2.9	3.4	3.3	3.1	3.6
Art	3.0	2.8	3.3	3.2	3.1	3.4	3.4	3.3	3.6
Drama	3.0	2.9	3.3	3.2	3.1	3.4	3.4	3.3	3.6
Irish	3.3	3.2	3.3	3.3	3.0	3.5	3.5	3.3	3.6
RE	3.2	3.1	3.5	3.4	3.3	3.6	3.5	3.4	3.7
Music	3.3	3.1	3.6	3.5	3.3	3.8	3.8	3.7	4.0
Overall mean	*2.7*	*2.6*	*2.8*	*2.8*	*2.7*	*2.9*	*2.8*	*2.7*	*2.9*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

Table 5.3 shows that there was a wider range of scores for vocational relevance than for previous types of relevance. Although the clustering of subjects down the scale reflects that of the preceding tables, the gaps between the cluster of subjects at the top and those in the middle, and between the middle cluster and the subjects at the bottom of the scale, are much wider in Year 10 than in Years 8 and 9.

The actual ranking departs decisively from the pattern for the other types of relevance: firstly in the respective demotion of home economics and RE; and, secondly, in that science becomes increasingly detached from the middle cluster of subjects in Years 9 and 10, moving gradually up the scale to become distinctly more important, in Year 10, than geography, which follows it, but still conspicuously less important than English, maths, IT and careers education.

- English, maths and IT, with the addition of careers education in Year 10, were believed to be the most vocationally relevant subjects by all three year groups.

- Consistently among the most relevant of subjects, IT was more forcefully endorsed here than in relation to current or non-vocational future needs.

- Art, drama, Irish, RE and music were found to be the least vocationally relevant subjects by all three year groups, becoming gradually less important over the Key Stage.

- French appeared to lose vocational relevance for pupils between Years 8 and 9.

With regard to changing perceptions of the relevance of different subjects, it may be possible to relate the increasingly positive perceptions of science here to its

status in Year 10 as the third subject assessed in the Key Stage 3 tests. Lord and Harland (2000) reported that a number of studies noted pupils' perceptions of the importance of science for a job or career. A possible explanation for the declining relevance of French might be that it gradually loses the appeal of novelty. Moreover, as several modern languages teachers observed, after Year 8, the proportion of oral activities, which pupils may see as more immediately relevant to a job or career, declines as the emphasis shifts towards more written work and grammatical exercises.

The scores disaggregated by type of school suggest that pupils in grammar schools believed that most of the curriculum is vocationally irrelevant. While secondary school pupils' perceptions of their subjects' relative degrees of importance appeared to be similar to those of their grammar school peers, their perceptions of vocational irrelevance overall were considerably less extreme.

As in the case of importance for adult life, the results from grammar schools present a polarisation between the few subjects perceived as highly relevant and the majority of subjects which were perceived in varying degrees of unimportance. The clusterings of subjects at particular points of the scale for both types of school for Year 10 differ particularly from the overall mean, and from one another, in relation to the middle cluster of subjects, that is geography, technology, PE, history and French. Not only science, but also, most conspicuously in grammar schools, geography, appear to gain in perceived vocational relevance in Year 10 as the scores for both subjects move respectively up the scale away from the rest of the middle cluster. In the grammar school results, the decline in the scores of the middle cluster of subjects relegates them to a position as the first 'irrelevant' cluster, and the scores of the clearly demarcated 'least relevant' cluster express more extreme perceptions of irrelevance than the corresponding cluster for secondary schools. The clustering of subjects in the secondary school results expresses more moderate perceptions of declining relevance down the scale, and the intervals between the clusters of subjects are less clearly defined.

- IT becomes increasingly important in both types of schools over the Key Stage, most noticeably so in grammar schools. In Year 10, it was perceived as important as English in grammar schools, though still less important than maths, while in secondary schools it was regarded as less important than both these subjects.

- In grammar schools, science occupies an intermediate position midway between the most relevant cluster of subjects and the second cluster, discernible from Year 8. In secondary schools, however, science does not appear to be perceived as distinctly more relevant than other subjects in the second cluster until Year 10.

- Geography, technology, PE, music, RE, Irish, drama, art and home economics achieved higher ratings from secondary school pupils than from their grammar school peers, over all three years.

The scores disaggregated by attainment grouping closely matched those for type of school and in this respect also corresponded with the correlation between the scores for type of school and attainment grouping in relation to importance for adult life.

- English and maths were the most important subjects for pupils in all three attainment groups in Year 8, and conspicuously more important than IT. Although this was still the case in Year 9, the status of IT had advanced

slightly for the lower and middle groups and most for the higher group. By Year 10, while English and maths were still more important than IT for the lower and middle groups, for the higher group it had drawn level with maths and was more important than English.

* There was considerable variation between the three attainment groups in the numbers of subjects perceived to have limited vocational relevance over the three years of the Key Stage. In Year 8, low attainers saw all their subjects as relevant except Irish. For the middle attainment group, the exceptions were RE, Irish and music; however, as early as Year 8, the high attainers perceived seven subjects in varying degrees of unimportance for a job or a career. While low attainers in Year 9 identified music and Irish as irrelevant, the total number of vocationally irrelevant subjects for the mid-attaining group in Year 9 doubled from three in Year 8 to six. Moreover, although the high attainers added only one more subject to their list, the expressions of irrelevance were generally more extreme, especially for music and RE. Between Year 9 and Year 10, the number of subjects perceived by low attainers in varying degrees of vocational irrelevance rose from two to seven. The number for the middle attainment group increased, from seven to eight, and for the higher group from eight to ten, with a conspicuously lower score for home economics than in Year 9.

* Technology and PE were consistently more important for the lower attainment group, and were still seen as vocationally relevant by this group in Year 10; they were considerably less important for the higher group.

* The scores for art reflected the same relative trend as technology, but this subject was awarded less relevance respectively by all three attainment groups, so that by Year 10 even the lower group regarded art as vocationally irrelevant.

* High attainers regarded science as more important for a career in Year 10 than in Year 9 (perhaps this was related to the respective science curricula for these two years).

The sharp decline in relevance registered by low attainers between Years 9 and 10 is intriguing. As in the case with secondary and grammar school pupils, low attainers' perceptions were less forcefully expressed than those of high attainers. Nevertheless, this group's perceptions of the diminishing importance of the majority of subjects at the end of the Key Stage suggests a declining sense of purpose in the curriculum as a whole which might be seen as a more moderate reflection of the narrowly focused perspective already discernible among their higher-attaining peers in Year 8.

The scores for high attainers here correlate undeniably with those for grammar school pupils, and can also be seen to correspond with the findings for these two groups of pupils in relation to future non-vocational relevance. Taken together, they reinforce the impression that the majority of high attainers and grammar school pupils appear to be rigidly focused on a very narrow range of subjects which they perceive in terms of strictly utilitarian vocational priorities.

As explained in reference to the findings for relevance to current needs, the overall mean scores for each type of relevance were disaggregated by gender of individual respondent. The findings for vocational relevance differed from those for other types of relevance in that by the end of Year 10, the year when pupils choose their GCSE options, the adherence to traditional gender stereotypes prevailed over a

wider range of subjects. However, as in Years 8 and 9, it appeared to be adopted more forcefully by boys than by girls.

- Pupils of both sexes thought careers education was one of the most vocationally important subjects, with English, maths and IT, but for girls it was appreciably more important than for boys.

- In Year 10, boys awarded eight subjects varying degrees of vocational relevance; the total for the girls was six; they chose the same subjects as the boys, but excluded PE and technology.

- Both boys and girls attributed much more vocational importance to science and geography than to history.

- While Year 10 boys perceived a greater number of subjects as vocationally relevant than girls, their perceptions in relation to the 'gender-sensitive' subjects (according to this study) were much more forcefully expressed. Thus, they awarded a positive score to technology and correspondingly negative scores, most vigorously to music, then home economics, drama and French. Girls, on the other hand, while agreeing, though less forcefully than boys, on the futility of music, were generally less inclined to be extreme in their responses; notably, girls valued French, home economics and drama more than boys did.

Gender relevance as a discrete 'type' of relevance

As recorded above, the overall mean scores for each type of relevance were disaggregated by gender of individual respondent in order to determine the degree to which pupils believed their subjects were more appropriate for one gender than another. In a further investigation of possible gender differences, the questionnaire also included a fourth category of relevance, '*mainly for girls ... mainly for boys*', in the semantic differential item.

According to the findings for this category, gender stereotyping was slightly more pronounced in grammar schools than in secondary schools for all three year groups. Grammar school pupils were more forceful about the appropriateness of PE for boys and home economics for girls. Moreover, in Year 10, grammar school pupils regarded science and IT as slightly more appropriate for boys, and French and art as more appropriate for girls.

The most notable gender stereotyping related to PE. While girls appeared to believe that PE was equally relevant to both sexes, the forcefulness of boys' responses claimed physical prowess as a pre-eminently masculine domain. As with the other types of relevance, both sexes assigned technology to boys, but boys were more assertive in their responses. In the same way, while both sexes thought home economics, and, to a lesser extent, music were more appropriate for girls, the boys were more extreme in expressing their views.

The interview responses supported these findings from the questionnaire. Again, vocational relevance was conspicuously deployed as the measure for relevance in general. Girls frequently dissociated themselves from technology on the grounds of its inappropriate career prospects; activities like 'sawing', and topics such as 'hydraulics' or 'pneumatics', were quickly dismissed; one girl expressed what appeared to be a common perception: '*I don't think I will be a person that makes up stuff, a mechanic or anything.*' Similarly, while the enthusiasm for PE continued among boys throughout the Key Stage, for girls, physical recreation seemed to lose its appeal as they grew older and they became more preoccupied with physical

appearance. As one Year 10 girl observed, '*I don't want to be a world athlete, just as long as I'm not immensely obese or anything*'.

These results suggest that gender stereotypes seemed to be more entrenched in boys than girls, particularly in terms of aspirations for a future job or career. Is it possible that growing awareness of the distinctness of the sexes may account for this in boys, in their need to be seen as 'tough' and consequently to dissociate themselves from anything they perceive to be 'girlish'? As girls allegedly mature earlier, could it be possible that they, by contrast, may acquire a more realistic and open-minded outlook earlier on, and a consequent willingness to consider a wider range of options, particularly given the efforts in education and training in the last few years to broaden the range of opportunities for girls? The notion that by Year 10 girls may be more compliant than boys in a school environment might also contribute to a willingness in girls to apply themselves more purposefully than boys to school expectations in this respect.

The table for vocational relevance (Table 5.3) demonstrates a considerable gap between the most vocationally relevant subjects and the cluster below it. Moreover, the scores for the most relevant subjects in this table are notably higher than those for the most relevant subjects in the preceding tables for relevance to current needs and to adult life respectively. Taken together, the findings from all three tables suggest that in general, over the Key Stage as a whole, pupils' perceptions of relevance become gradually more and more closely associated with the value of subjects for a job or career. They correspond in this respect with those of Stables and Wikeley (1997), and John and Thomas (1997). Both of these studies recorded that pupils related the importance of English, maths and science to usefulness for a career. Wikeley and Stables also noted that pupils attached relatively little importance to the creative arts and RE and in a further study (Wikeley and Stables, 1999, p. 295) they concluded that:

> ... *in general, pupils see school subjects in terms of their utilitarian value for future careers; importance is seen as 'usefulness for jobs', not 'relevance to my life now'.*

The questionnaire results highlighted the importance attached to academic achievement and vocational aspirations. The interviews offered a more detailed perspective on pupils' views of the relevance of individual subjects, and some insight into the relative significance of other kinds of relevance that recurred, throughout the data.

5.5.2 Pupil perspectives from the interviews

During the interviews, pupils were asked first whether they had '*done or learnt anything*' which was '*particularly important or meaningful*' for them personally. The word '*anything*' was used deliberately to include an opportunity to think in general terms, rather than necessarily with reference to subject categories.

Next they were asked whether, out of all the things they had done during the current term, they had done or learnt anything which was '*particularly useful*' for them '*now*'. They were then asked whether they had done or learnt anything during the current term that would be particularly '*useful in the future*'.

It must be noted that, while the questionnaire included an item specifically directed towards relevance for a job or career, and another to investigate pupils' views on the gender relevance of their subjects, this was not the case in the interviews. The interview schedule included a specific question intended to elicit any negative

141

perceptions; accordingly, pupils were asked to identify anything they had '*done*' or '*learnt*' during the current term which they thought of as '*not useful at all – either now or in the future*'.

Analysis of pupils' interview responses reinforced the overall pre-eminence of vocational and academic relevance evident in the tables above. Nevertheless, a range of other kinds of perceived relevance recurred, albeit less frequently, throughout the data. At the same time, a significant minority of responses highlighted the role of individual aptitude in determining pupils' perceptions. The following discussion presents a typology of relevance. Academic and vocational relevance will be considered first, followed by reference to other types of relevance construed from pupils' responses, and an account of any differences in the way they were valued from year to year.

A typology of relevance

The seven main categories to emerge from the interviews are given below, followed by a discussion of each one in turn:

1. **academic progress**
    i) *curriculum proficiency*
    ii) *academic attainment*

2. **vocational currency**
    i) *useful for jobs/careers in general (generic)*
    ii) *useful for a specific job/career*

3. **personal interests**

4. **practical and domestic knowledge/skills**

5. **life skills, personal development**
    i) *development as a unique individual*
    ii) *development of social skills*

6. **awareness of wider issues**

7. **personal health/welfare**

ACADEMIC PROGRESS

Comments referring to academic progress fell into two distinct categories:

♦ **curriculum proficiency**: mastering a challenge, enhancing understanding or improving skills *per se*, for the sheer satisfaction of doing so;

♦ **academic attainment**: a general concern to earn good marks, particularly in academic subjects, or in relation to specific assessments such as the Key Stage 3 tests.

The concept of **curriculum proficiency** was frequently expressed in terms of learning something 'new', '*how to use the buttons on the calculators*' in maths in Year 8, for example, but it also denoted the development of existing knowledge or skills, as in '*improving my newspaper skills*'. Some pupils recognised the cumulative nature of learning at school. One high-attaining girl, for example,

said that what she was doing in maths would be useful for the future because they would be doing *'the stuff that we are doing now again, except more advanced, probably, and we will need to know the stuff now to be able to do it then'*.

The importance of subjects associated with **academic attainment** recurred throughout the interviews. One girl in Year 8 commented that the maths she was doing was *'useful to her now ... for remembering in case, like, a test'*. Another pupil highlighted the contrast between Year 9 and Year 10. For her, as for many of her peers, the most important subjects were English, science and maths; according to her, Year 10 was *'different'* from Year 9, *'because I didn't have my Key Stage 3 to worry about, and this year I do'*. She added that in previous years other pupils would *'mess about'*, but that this year they were *'taking English, maths and science really seriously'*.

However, the way in which assessment coloured pupils' perceptions of relevance varied between individuals. One boy in Year 10 reflected that he had learnt *'a few good things'* in the first half of the summer term, such as grammar in English for his Key Stage 3 exam. But another boy in the same school had found hardly anything useful during that time — *'it was just repeating everything'*. The only thing important for him had been learning about *'pointillism'* in art. His readiness to put personal interest and enjoyment first was unusual, particularly in Year 10: *'I learnt more about that. I just like those pictures.'* It was not uncommon for pupils to express pleasure in art, but to prioritise it above opportunities for enhancing academic or vocational achievement was comparatively rare.

As reported above, the number of responses for curriculum proficiency gradually diminished between Year 8 and Year 10. What may seem equally worth noting is the fact that while the drop in curriculum proficiency in Year 10 was balanced by a dramatic increase in the number of responses relating to attainment, this was not the case for Year 9, where the responses for attainment were even fewer in number than in Year 8.

Table 5.4   Number of responses for curriculum proficiency and attainment

	Year 8	Year 9	Year 10
Curriculum proficiency	95	65	35
Attainment	30	22	77

Source: *NIC Cohort Study: case-study interviews with pupils*

Given the evidence for a surge of disaffection from the curriculum in Year 9, documented in relation to manageability (see Chapter 6) and enjoyment (see Chapter 7), could the paucity of responses for attainment from Year 9 here, particularly when compared with the relatively high number in Year 10, underline the role of assessment as a powerful source of motivation? It may be that a schooling system that places such a strong emphasis on academic assessment encourages children to perceive it as the dominant incentive for learning; thus, if academic assessment is omitted in any one year, few alternative sources of motivation are available to them. Recent research in England (Sharp, 1998) has noted the apparent state of educational limbo in the second year of Key Stage 3. Compared with the impact of a new environment in Year 8, and the explicit focus on the options process and formal assessment in Year 10, there is nothing *'special'* to mark this year out in a pupil's school career. Hence, it is suggested, motivation may be at particularly high risk.

VOCATIONAL CURRENCY

The increasingly important role of vocational aspirations, evident in the questionnaire findings, was clearly discernible in the interviews. As early as Year 7, many pupils were already considering the relevance of the curriculum exclusively in terms of its relation to a specific job or career (type 2ii). One boy was convinced that nothing was useful to him at school because he intended to be a farmer like his father. A number of children, particularly girls, confided '*I want to be a vet*'.

This tendency became even more marked during the course of Key Stage 3. English and maths were repeatedly invested with 'generic' vocational currency (type 2i) and cited for their value in terms of '*getting a good job*'. Those who referred to French as a 'useful' subject frequently explained that '*you need French for a lot of jobs now*'. When asked to identify the most important things she had learnt, a girl in Year 9 readily depicted her criteria:

> *I want to be a vet when I am older, so I have been thinking about what I need to do to be a vet, so comparing it with that, and whether they are important or not.*

A great many pupils seemed convinced of the unimportance of subjects they enjoyed, if they could not relate them to academic or vocational goals. A girl in Year 8 had relished a class novel – '*it was really good ... you just wanted to read on and on*' – but nevertheless concluded it was '*... just basically a story ... great fun, but I don't think that's useful*'. A Year 9 pupil expressed similar reservations about chemistry: '*Although I enjoy it, I am not too sure that I would really be mixing chemicals.*'

According to the questionnaire results, IT scored a consistently high relevance rating particularly for vocational currency, especially in Year 10. Asked on two different occasions what had been the most important learning since Easter, a grammar school boy in Year 10 unhesitatingly identified IT each time. He could think of nothing else important at all. His class had been using the internet for the first time, and believed that '*all the jobs in the future will need IT skills, so ... that's quite valuable*'. A younger pupil, in Year 8, also thought '*computer skills in IT*' were important because '*if you are going to get a job in a few years' time, you need the skills we are learning now ...*'.

PERSONAL INTERESTS

A persistent minority of interviewees acknowledged the value of a particular subject in terms of its personal appeal *per se* (type 3). Their comments poignantly revealed the pleasure they experienced at encountering something they could relate to as individuals, among the apparently less engaging array of tasks they were expected to complete during the course of the school day.

The preference for expressive activities was conspicuous among grammar school pupils. One girl in Year 9 felt that art was personally important for her '*because I like painting and modelling and things ... I enjoyed it*'. Another girl liked dancing; her class had been composing their own dances and she had enjoyed learning '*how to do things on our own*'; she added that dancing helped to '*get my mind away from all the school work*'. A boy elsewhere thought science was important, but added that other '*important things*' would be '*art and technology ... to get your mind off more work, and to do some fun things in school*'. The evident enjoyment of the creative arts in this type of school was in stark contrast to the forceful rejection of their claim to any lasting worth presented by the questionnaire results.

PRACTICAL AND DOMESTIC KNOWLEDGE/SKILLS

The real-life relevance of subjects offering opportunities to develop and improve on practical skills (type 4) was acknowledged by pupils of all abilities. The fact that interviewees in all year groups referred to such skills more frequently than to personal and social development (type 5) suggested that their interpretation of the concept of life skills may be predominantly a literal one.

According to the questionnaire findings, while home economics earned a relatively low rating for its vocational currency, it was ranked as one of the 'top five' subjects, for relevance to current and future needs, placed next in importance to the generic 'vocational survival skills', English, maths and IT. Most interviewees who referred to the relevance of home economics emphasised its practical value; one pupil explained, '*it teaches you how to cook things*', and another had appreciated learning, '*how you treat minor burns and minor cuts and things*'. However, one grammar school boy expressed an exclusively acquisitive vocational approach: first asserting that IT was '*important for jobs*', he added '*... and HE, with the Food Hygiene Certificate*'.

Other subjects seen to have a practical application included physics, and technology: as one boy remarked, '*that should come in handy for DIY*'. The interview responses supported the questionnaire findings for technology, in that the majority of positive comments came from boys; girls frequently dissociated themselves from both its vocational possibilities and its implications for everyday use. A girl in one school, for example, could not see herself as '*a person that makes up stuff, a mechanic or anything*' and a girl elsewhere distanced herself from CDT in a similar fashion '*because we have been doing things like hydraulics ... and pneumatics*'.

LIFE SKILLS: PERSONAL AND SOCIAL DEVELOPMENT

Given that the value of '*spiritual*', '*moral*', and '*cultural*' development is explicitly recognised in the NIC, the apparent neglect of the relevance of life skills (as opposed to physical survival skills) in the sample may seem a surprising discovery. Life skills in this context refer to the personal and spiritual development of the individual (type 5i) and to the development of social skills (type 5ii). Gardner (1993) defines life skills as '*interpersonal and intra-personal intelligences*', which although '*immensely important*', are '*not well understood, elusive to study*'. Qualities whose elusiveness is thus openly acknowledged in the world of professional psychology might well be more difficult for schoolchildren both to conceptualise and to articulate than more immediately relevant and more precisely definable academic and vocational goals. A boy in Year 8 asserted that drama lessons had been personally important for him in terms of self-confidence (type 5i):... '*drama, because I've never done that before, and this term it's helped me really speak up and ... in classes it's helped me just ... open up more*'. For a girl in another school, teamwork in PE had been '*quite important*' in relation to the development of social skills (type 5ii):

> ... *when you learn to work together and stuff, because we are doing ...*
> ... *teams, and instead of going off and doing your own thing, you have*
> *to work together ... and being different and stuff, so you just have to*
> *think ... and get everyone's opinions and ideas and stuff ...*

She recognised such skills as transferable, '*because if you are doing, like, mapwork or anything in a team, you need to know, like, everyone's ideas ...*'.

That pupils find abstract concepts hard to describe is borne out by the imprecision which characterised their references to '*general knowledge*'. Thus, the relative paucity of references to life skills may arise partly from their relatively abstract and '*elusive*' nature:

- Citations of relevance in Years 8 and 9 were approximately equal; however, in Year 10, life skills declined in value more than other types of relevance.

- Pupils in Year 8 referred more frequently to aspects of social rather than personal development than pupils in Year 9. This may reflect their concern at this stage with acclimatising to the demands of the social environment of post-primary school. Making friends, and dealing with the problem of bullying, '*stand up for your rights*' '*tell a teacher*', were recurring themes in Year 8 .

- Comments on social development frequently involved the importance of learning to work as part of a team, '*learning to work in groups is important ... to cooperate with other people ... because you need to be able to listen to other people and their views, and if you work in a group you get a lot more ideas*'.

- Some interviewees indicated the importance of developing respect for and responsibility to others, in relation to their peers in school, for example, and to those with disabilities.

- Overcoming anxiety at speaking in front of others, '*so I can communicate better and speak in front of people better*' was a personal milestone for pupils in both Year 8 and Year 9.

- One or two individuals in every year, including Year 7, referred to the importance of spiritual development. A grammar school boy in Year 9 said that in RE it had been '*interesting, talking about Jesus, and different aspects, like when you die and that sort of thing*'.

Responses on personal development were often concerned with self-esteem. One girl noted the explicit emphasis in her school on building '*a lot of self-esteem*' in her first term: '*Whenever you are feeling low, teachers just don't tell you off. They just can be really nice to you.*' A significant minority of pupils underlined the significance of recognisable academic progress for establishing self-worth; one girl said learning the names of different cloud formations in geography had been useful '*because ... you feel smarter and you feel that you know more*'. For some pupils, this experience could feel even more rewarding if academic achievement meant being able to help someone else: '*All of the subjects you learn something, and say you went home and someone was trying to ... you could say "I know about that and I could help you" and you feel really proud that you are helping someone.*' A French teacher identified '*the enormous sense of achievement*' for many youngsters of learning a completely new subject in Year 8 because '*they don't feel like failures before they even start*', as she felt they might in maths and English, '*where they have been told they won't get one or the other and they have no confidence*'.

It may be worth remembering the role of curriculum proficiency, as a non-competitive 'personal best', in securing a sense of self-esteem. The dominance of academic and vocational attainment in so many pupils' perceptions here may be seen as highly undesirable if it implies the comparative neglect of other subjects such as home economics, art, PE or music, and the less easily measurable learning involved in social, emotional and spiritual development. However, until the value

of these aspects of the curriculum acquires equal recognition with those which emphasise '*the linguistic and logical-mathematical intelligences*', as Gardner (op. cit.) recommends, it may be salient to bear in mind the scope offered to pupils by individual curriculum proficiency, rather than specific attainment in academic subjects, at whatever level, for bolstering self-esteem, which may be uncomfortably vulnerable over the Key Stage. More will be said about the relation of academic achievement to self-esteem in the following section (see 5.6).

AWARENESS OF WIDER ISSUES

Relatively few pupils registered awareness of environmental, political or social concerns (type 6). Again, perhaps reflecting the abstract nature of these concepts, the language of pupils' responses could be very imprecise. Asked what he did in PSE, for example, one boy replied '*we do about the world and things, and life*'. However, one girl referred to the impact of learning world religions: '*Because it, sort of, opens your eyes and it was not just religions in NI and all that conflict, it's quite good. I find that quite meaningful.*' Another pupil referred to a class discussion on euthanasia and abortion which they felt had been important because '*you learn to think of everybody's point of view*'. Awareness of wider issues became slightly more prominent in Year 10, either perhaps, because as pupils matured, they became more interested in issues of more general significance, or possibly because their attention was drawn to them by specific aspects of the curriculum.

PERSONAL HEALTH/WELFARE

References to personal health were also relatively scarce among all year groups in the sample. One Year 9 boy felt it had been useful to learn about drugs and smoking, '*what it does to you*'. Pupils who cited health issues as important referred to the risks involved in sex, drugs and smoking much more frequently than to nutrition and physical exercise. Perhaps the relative mundanity of the everyday routine of 'keeping fit' accounted for this discrepancy.

According to the seven types of relevance identified in the typology, pupils in all three year groups in Key Stage 3 associated 'useful' or 'important' learning much more frequently with academic progress and/or vocational aspirations than with any other kind of experience. This trend was already discernible in the responses of the Year 7 interviewees. The fact that, according to Year 7 teachers, the curriculum in the last two years of most primary schools '*squeezed out*' subjects not assessed in the Transfer procedure, appeared to have convinced a large number of Year 7 pupils of the comparative irrelevance of much of the curriculum. Many of them attached little importance to the humanities and the creative arts, appearing to believe that their chances for survival in post-primary school and the future in general were best secured through English, maths and science.

Changing perceptions of vocational and academic relevance

Just as Tables 5.1–5.3 revealed an increasing polarisation between subjects believed to be the most and least vocationally relevant, so the interview responses suggested a narrowing of the definition of relevance in Year 10 towards vocational and academic importance, at the expense of other types of relevance, for which responses gradually decreased in number over the Key Stage.

The interview data revealed a slight shift of priorities between Year 9 and Year 10:

- in Years 8 and 9, the number of responses identifying relevance in vocational terms (136 and 125 respectively) exceeded the number for those relating to academic progress (115 and 103 respectively);

- in Year 10, this pattern was reversed (academic progress: 121; vocational currency 114).

This may reflect an emerging recognition of the importance of a narrow range of academic qualifications as the most effective route to any job or career as pupils approach the beginning of Key Stage 4. This speculation seemed to be supported by differences between the findings for curriculum proficiency and those for academic attainment:

- in Years 8 and 9, responses for curriculum proficiency outnumbered those for attainment (by 95 to 30 and by 65 to 22 respectively);

- in Year 10, this pattern was reversed (curriculum proficiency 35, attainment 77).

Narrowing definitions of relevance over the Key Stage
In the Years 7 and 8 interview responses, a wider range of subjects was perceived to be vocationally relevant than in Year 10. The narrowing of the range over the Key Stage was displayed in Table 5.3, where, by Year 10, a small minority of vocationally relevant subjects were clustered at the top of the scale. According to the interviews, career ambitions in Years 7 and 8 tended to be more closely attuned to personal interests, in music, football or animals, for example, than later in Key Stage 3. It seems many children may arrive in post-primary school with an optimistic and (given their inexperience and immaturity), in some cases, perhaps, unrealistic outlook, on what the curriculum can offer them in terms of achieving individual vocational goals. As noted above, in contrast to Years 8 and 9, the number of perceptions of academic relevance in the Year 10 responses exceeded those for vocational currency. This may suggest that within the enclosed environment of post-primary school, the priority of formal assessment (first experienced in the Transfer Test), gradually re-emerges over Key Stage 3, absorbing many highly specific individual aspirations into a sobering recognition that the competitive world of academic attainment must be navigated in order for any personal ambitions to be realised. Coming to terms with these expectations, once the novelty of going to '*big school*' has worn off, may account perhaps in part for the level of disengagement uncovered here in Year 9, when, as suggested above, pupils lack the explicit landmarks of the Key Stage 3 test and the options process to give a sense of purpose to their academic exertions.

The pupil interview responses reflected the overall trends of the questionnaire findings, in underlining an overriding preoccupation with vocational and academic concerns. However, they also yielded a typology of other kinds of relevance, which offered a useful insight into pupils' views of the importance of other aspects of their lives, in relation to particular subjects, and on the way in which priorities from Year 8 changed during Years 9 and 10:

- By Year 10, responses related to types 3–7 in the typology were considerably fewer in number than in previous years (Year 8: 197; Year 9: 176; Year 10: 125). Moreover, the difference between the number of nominations for academic and vocational relevance (types 1 and 2) and the number for personal interests and practical and domestic skills (types 3 and 4), which were ranked next in importance, was more striking in Year 10 (77) than in Year 8 (53) and Year 9 (58).

- Personal interests (type 3) and practical and domestic skills (type 4) were consistently seen as the most important of other types of relevance in the typology.

- Life skills (type 5) were almost equally valued in Years 8 and 9, but in Year 10, pupils appeared to be slightly more concerned about global issues than about life skills or personal health.

Comments on non-vocational, non-academic learning indicated an awareness, among some individuals at least, of its potential importance. Their relative infrequency corresponded with the persistently low ranking of subjects associated with such learning in the tables above. It also corresponded with the relative infrequency of appropriate learning opportunities in the curriculum, as noted elsewhere in this report.

According to the data here, the polarisation already visible in Year 7, between subjects seen as academically and vocationally relevant, and other relatively 'irrelevant' subjects, appeared to be only temporarily suspended in Year 8, when pupils were confronted with the stimulation and novelty of a 'new' curriculum upon their arrival in post-primary school. The questionnaire findings for synchronic and diachronic non-vocational relevance suggested that while the relevance of the curriculum for current needs declined between Year 8 and Year 10, its relevance for adult life in general was sustained. However, scrutiny of the findings for the latter revealed a close association between the most relevant subjects with those most relevant for a job or a career. Thus, the polarisation between subjects, according to degree of association with academic and/or vocational attainment, already discernible in Year 7, can be seen to gradually re-emerge over the Key Stage. As the evidence from both qualitative and quantitative data here attests, it is firmly reinstated by the end of Year 10, finding its most unequivocal expression in the responses of pupils from grammar schools.

This section has explored pupils' views of the relative importance of their subjects in terms of relevance to their present experience, inside and outside school, and to life in the future, which, according to the data, seems for many of them to be largely subsumed into a concern with vocational priorities. The following section will attempt to elucidate the definitions of relevance which pupils apply, collectively and individually, to their experience in the classroom. It will also examine how far relevance, as they perceive it, is seen to make their learning more effective.

5.6   The curriculum as internalised

How do youngsters acquire the views of relevance considered above? Do they believe that relevance helps their learning? While pupils were not directly asked this question, teachers were. In considering the effectiveness of relevance, therefore, it will be possible to see how far the two perspectives coincide.

5.6.1   The impact of relevance on the learner

As explained in the opening sections of this chapter, pupils receive three kinds of messages about the relevance of respective subjects.

1.   **Explicit** 'messages' (*through the curriculum as mediated*) – the teacher deliberately explains to pupils why their learning is relevant:

- a science teacher pointed out that a particular experiment would feature in the Key Stage 3 test (academic relevance);

- an English teacher emphasised the vocational relevance of communication skills; and

- a form tutor stressed the importance of understanding the health risks associated with particular drugs.

2a. **Implicit** 'messages' (*from the curriculum as specified and planned*) – demonstrated in the previous section to be a powerful source of motivation which exerted an influence, irrespective of any personal considerations:

- the amount of curriculum time allocated to a subject, on the timetable and for homework;

- a subject's assessment status, formal or informal (both of which may vary between schools for non-core subjects).

2b. **Implicit** 'messages' (*through the curriculum as experienced*) – pupils relate to the real-life relevance of content and/or skills:

- individual teachers may deliberately enhance the real-life relevance of the learning in the belief that this will make it more enjoyable and/or more effective, but this relevance is not made explicit.

Real-life relevance (2b above) here refers to relevance for the present and immediate future outside school, rather than to relevance for the longer-term future on leaving school. From everyday experience in the classroom, the majority of teachers certainly appeared to believe that real-life relevance was equally important to academic relevance, in terms of engaging pupils in the task in hand. However, the number of pupils' comments on the importance of real-life relevance, according to categories 3–7 defined in the previous section, were much fewer than those expressing academic and vocational concerns. Nevertheless, they offer some insight into what might be of crucial, though less frequently explicitly acknowledged, significance for motivation and engagement, particularly in relation to personal development. Responses here may suggest that the relevance of personal development, implicit in the self-esteem derived from a recognition of progress in curriculum proficiency, may operate as a persistent undercurrent to more collectively and explicitly pursued academic and vocational '*targets*'.

The following discussion will consider the way youngsters in the sample conceptualised the relevance of their learning, in relation to the present and the future, in the light of what relevance appeared to mean to them.

Real-life relevance

The minority of pupils who referred to 'real-life relevance' agreed it was helpful for learning. From their point of view, relevance to current needs embraced all aspects of life outside the enclosed and highly structured environment of school. One Year 9 girl felt '*learning dialect*' in English was important in order to know '*different ways of saying things in Ireland*'. A Year 10 pupil referred to learning '*how you become independent*' in home economics.

In the case of very high-attaining pupils, a sophisticated version of academic relevance suggested the extent to which academic skills might be identified with personal development and fulfilment in the future. Thus '*learning to work by yourself, and research skills, things like that*' were important for one secondary pupil, and another mentioned learning to use reference books in the school library.

However, in references to life in the future, a sense of striving for vocational goals prevailed. Maths was valued as *'helpful for getting a job'* much more frequently than for *'if you are having problems with a bank, you can sort out your figures'*. A girl in Year 10 observed that when she thinks her learning is 'useful', *'it makes me try harder and set my targets higher'*. Her use of the word *'targets'* itself communicates the pre-eminence of highly structured and measurable achievement. An overriding preoccupation with academic and vocational concerns, on the part of a substantial majority of pupils, seemed to marginalise or even preclude anticipation of any other kind of experience.

Relevance to real-life and effective learning

The majority of teachers affirmed the learning benefits of referring to everyday experience. A drama teacher attributed the alleged success of role-play based on a class novel to the fact that pupils could *'relate'* to the feelings of the 14-year-old girl who was the main character: *'I think it gives them a good understanding, because it's based around their age.'* A geography teacher referred to the interest shown in topics such as weather forecasting, which related to *'everyday occurrences'*. Specialists in intellectually demanding subjects stressed the positive effect of real-life relevance on the will to learn. A French teacher pointed out that *'if they feel "I am never going to use this", then obviously they are not going to work hard at it ... so it's down to us to try and make it relevant ...'*. A Year 10 maths teacher claimed that *'you can make a difference between levels if you convince the children it is appropriate and they want to learn ... you feel that they are working with you, rather than working against you'*.

Several science teachers highlighted the dilemma of fulfilling specified curriculum requirements, while trying to enhance real-life relevance in order to sustain pupils' enthusiasm. Other researchers (Parkinson *et al.*, 1998; Neil and O'Rawe, 1998) have suggested that the significance of science to everyday life requires greater emphasis in the curriculum. According to this study, practical experiments were seen to enhance the appeal of science in this respect. Moreover, where pupils were allowed to conduct experiments for themselves, *'using Bunsen burners in science'* for the first time, for example, their allusions to progress in curriculum proficiency underlined its significant implications for self-esteem. In spite of such benefits, however, science teachers observed that a heavy workload frequently reduced such opportunities to a minimum.

The value of general knowledge

Some pupils conceded that although they felt a particular subject was unimportant for them personally, it might nevertheless have some value in adding to their general knowledge. Such comments frequently used the lack of vocational relevance as a measure of a subject's limitations. Thus, a boy in Year 8 asserted that although it had not *'helped'* him to learn about settlements in geography, because he did not intend to become a geography teacher or *'a planner'*, it had been *'helpful to an extent ... for general knowledge, to know ...'*. Another boy in Year 8 commented that *'history is kind of useful sometimes, maybe not as much for a job* [as maths] *but still kind of useful things to know'*. Similarly, a girl in Year 9 felt that the work she had done on composers in music gave her *'a bit of background history ... for, like general knowledge'*, but at the same time she believed it *'wouldn't be very important'*. As in the case of life skills, the vague terms in which pupils referred to general knowledge suggest that the relevance of such an amorphous concept may have been difficult for them to apprehend intellectually, and therefore, to articulate effectively.

'New' learning and self-esteem

Throughout the interviews, pupils repeatedly associated learning with learning something 'new'. If we assume that 'learning' is relevant to pupils, because they expect to learn when they come to school, the relevance of new learning is thus the most explicit, and most accessible, kind of relevance from their point of view. By the same token, if it is assumed that pupils expect a lesson to consist of 'learning', then they may see any learning that is not new to have little relevance or importance.

The interview responses would seem to support this interpretation. A girl in Year 8 identified the new subjects, French and Irish, as important learning on her arrival in post-primary school: '*We have learnt how to speak different languages. In primary school we didn't get to do anything like that.*' The comments of a boy in a grammar school illustrated the way a sense of personal achievement through new learning was linked with self-esteem – maths and history had been important for him during the current term: '*I learnt a lot ... it sort of let me see how far, like, prove I was able to do that level, after sort of jumping from quite an easy level to the next one.*'

Another pupil vividly described the intellectual process of continually rearranging new learning, here in English, until it was assimilated into a new conceptual framework. Her description, like the preceding one, implied recognition of a subliminal phase in this process which made the point of reaching understanding seem quite sudden: '*English actually tells you ... it's like a jigsaw ... when she tells you something, it seems all like ... and then one day you just get the picture, and you know what she is talking about.*'

Learning what was not '*new*' was repeatedly seen as irrelevant. A Year 9 pupil alleged that the fractions they had been doing in maths were of little use because she did them '*in P6, P7 and in the first year ... most people already knew how to do them*'. A boy in Year 10 acknowledged the importance of '*a lot of the things*' he was doing, but evidently found the repetition of revision frustrating: '*It's important to know and useful to know, but to go over it again so many times – it defeats the progress.*' Without the personal satisfaction of recognising that their learning had advanced, most pupils saw very little point in it.

The role of perceived progression in building self-esteem was seen by several teachers to be more important for many pupils than perceptions of 'real-life relevance' *per se*. A Year 9 maths teacher thought '*a lot of children get a lot of satisfaction from being able to do the work properly*' and did not question its wider significance. A boost to self-confidence was seen to have stimulated further learning in music: '*performing*' on the keyboard had allegedly brought Year 10 pupils '*a sense of personal achievement ... the greatest motivation that you can really get, because once they realise that they can do that, they suddenly want to go on and do something else, get their bass in ... their rhythms*'.

As the preceding section revealed, responses related to curriculum proficiency considerably outnumbered those relating to attainment in Years 8 and 9. In these two year groups, a persistent majority referred very positively to the sense of achievement they gained from new learning, the recognition that they had moved forward.

The utilitarian emphasis in the pupil data on academic and vocational attainment with respect to life in the future is undeniable. However, given the fundamental importance of self-esteem, implicit in pupils' responses here, it seems that the

preoccupation with academic and vocational relevance might need to be interpreted with careful regard for the implications of individual curriculum proficiency in this respect. It seems that, however urgent they may be, individual needs for self-esteem in school often have to be accommodated within a collective focus on utilitarian goals.

The comparative unimportance pupils attached to learning that was not 'new' (revision, reinforcement and review) suggests their concept of learning may be largely linear. They may see learning essentially as a journey forward through time, and any requirement to stop and look beyond their immediate surroundings, or to return to territory they already know, may be experienced as an unnecessary and frustrating interruption. Accordingly, it might be helpful to extend and broaden their understanding of learning (their meta-awareness) by breaking away from such a linear perspective. Learning might still be seen as a 'journey', but as one which is cumulative and recursive, returning to the past to gain greater momentum for exploring the future, and reaching outwards to seek connections with other spheres of learning in the present.

'Nothing is important for me now'

One grammar school girl in Year 8 denied any relevance in the formal curriculum. She said the most important learning for her had occurred outside the classroom: *'about friendship and stuff ... you don't learn them in lessons. You learn them with the way of life around the school ... having a good friendship, not wee girlie fights ... wee catty children'.*

Her comments underline the immediate and often painful relevance of social and personal development. Perhaps because of messages of its inferiority implicit in the planned and specified curriculum, the relevance of personal development was overlooked by the majority of learners, possibly deemed as an inappropriate response to the interview question. Pertinently, many of the comments on personal development derived from one particular school, where numerous pupils referred explicitly to *'self-esteem'* and learning *'to work together'.*

For a minority of pupils, the entire curriculum appeared to be meaningless. One high-attaining Year 10 girl in a secondary school who wanted to be *'a pilot'* or *'a physiotherapist'* painted a grim picture of a monotonous regime which bore no relation for her to the real world outside:

> *Each lesson you just go in and do the work, and you don't seem to ...*
> *whenever you go home and at the weekends and stuff ... nothing you*
> *ever do in school seems to be the same, like outside school. It's just*
> *work and work and work, and then outside school you just, like, have*
> *fun or whatever.*

A Year 9 pupil said she would *'learn better'* if she felt the curriculum was relevant for her life in the present rather than for life in the future:

> *... it seems kind of boring, the stuff that you will not need for ten years.*
> *But if you were learning stuff that you would need maybe tomorrow, or*
> *the next day, you would probably think 'this is good'.*

The comments of some pupils implied that they took the relevance of the curriculum 'on trust' for the future, because they could not see any way in which it related to the rest of their present experience. A high-attaining Year 10 boy in a grammar school explained:

> *The stuff we learn at school ... a lot of it is not, like, practical, that you can go out and apply it to your life – except PE, where you are playing football outside school. ... A lot of it is just sort of academic or something. You can't actually apply it to your life. ... Nothing is important for me now.*

However, he said he was '*not too bothered*' about this, and that he would '*just wait*'. He gave the impression that he believed that what he was learning now would be useful in the future. According to the tables presented earlier, this philosophy may have been quite common; although synchronic relevance declined for most subjects over the three years, diachronic relevance seemed to stay the same, or even increased in Year 10 (as in the case of IT).

A number of teachers assumed that pupils found their work relevant because they always completed it to a satisfactory standard. An Irish teacher more cynically attributed this apparent show of commitment to utilitarianism. He believed that, perhaps like the grammar school boy quoted above, '*there are pupils who will go home and do it because they know they have to do it and they want to move on, and whether it's relevant or interesting or not, they will do it anyway*'. The development of a utilitarian perspective over Key Stage 3 was highlighted by a home economics teacher who felt that in Year 10 '*a lot of students at this stage switch off if they are not considering doing it for GCSE, and motivation is a bit of a problem*'. It might be worth investigating the extent to which a utilitarian approach to the curriculum may be encouraged at home, as well as through academic priorities prevailing in schools.

'Not useful' or 'unimportant' subjects

Comments on the unimportance of individual subjects, or groups of subjects, were more common than rejection of the entire curriculum. The perceived lack of real-life relevance (implicit 2b) in particular topics could make otherwise valued subjects seem pointless. With respect to maths, a girl in Year 10 could not see herself '*needing*' Pythagoras' theorem; a grammar school pupil's comment on work on a novel in English suggested that a highly structured approach had erased the possibility of reading for pleasure from her mind: '*... Most people don't really need to read novels and do character analysis and things like that in the future. It's pretty pointless.*'

The view that French would be more useful for the future than Irish is suggested in the tables for both diachronic and vocational relevance above. A high-attaining girl in Year 10 attributed the relative appeal of French to its wider applicability. She explained her original reason for studying Irish (as opposed to Spanish), in addition to French:

> *I thought 'Well, my ancestors would have spoken it, so I should know it. It is the language of my country and I don't even know it. ... It's like a tradition that everybody does Irish'. ... So I sort of felt that too.*

However, subsequent experience had convinced her that Irish had very limited applicability: '*French is such a good language because so many different countries you can use it, and Irish, it's just ... such a waste of time ... thinking "When am I going to use this?" and I really regret choosing Irish.*'

The subjects most frequently singled out as specifically '*not useful, now or for the future*' were music, history and RE. However, there was some variation between year groups, and the responses of individual pupils covered the full range of the curriculum.

Although there was a conspicuous lack of interest in history in Year 8, a few pupils valued an opportunity to relate the present to events in the past, particularly in Irish history. One boy who had been studying the Battle of the Boyne had found this '*culture ... really good*' and explained he meant '*... ancestors-wise ... how everything happened, Catholic and Protestant*'. However, such comments were relatively rare. The comparative irrelevance of history and RE, according to the interviewees, corresponded with their status below other academic subjects in the questionnaire results, and recalls the argument that their lack of appeal may be related to their exclusive location in the past in pupils' minds. Although there were certainly an appreciable number of pupils who identified the unimportance of RE and history in purely instrumental terms – '*I don't think there's a job you could get to work for history*' – many of them referred to the intrinsic association with the past – '*you're not going to need to know about the life story of Mary, Queen of Scots*'. That such an interpretation denies these subjects any real-life relevance in pupils' perceptions is clear from the following explanation for indifference to RE from a boy in Year 8: '*It's just telling you about the people before. It's not really telling you about now or the future or anything. It's just telling you about the past.*'

A similar attitude was evident in a Year 9 girl's question, '*What are you going to do with things years ago?*' Bearing in mind the earlier speculation that the ability to see the relevance of the past and to relate it to the future may gradually emerge with maturity, it is interesting that history was less frequently identified as a specifically '*not useful*' subject by pupils in Year 10.

One of the interview questions specifically asked whether pupils had '*learnt anything which would be particularly useful for* [them] *in the future*'. It is possible that this may have caused some of them to focus deliberately and exclusively on subjects where they felt most confident they could give the 'right' answer. Academically and vocationally relevant subjects, such as maths and English, their relevance implicit in the timetable and their assessment status (as in 2a. above), would most readily lend themselves to this purpose. The response of a grammar school pupil in this respect may shed some light on the value of explicit relevance (as 1 above). She nominated geography as a subject that would not be useful for the future '*because there's nothing that teaches you about the future in geography*'. Her observation implies that her teacher might need to make relevance to the future more explicit for her to be able to appreciate it.

The role of individual aptitude

According to the survey results, individual perceptions of relevance were most susceptible to variation in the creative arts and modern languages. Teachers of these subjects were often acutely aware of the impact of aptitude (or lack of it) on effective learning. An art specialist referring to class discussions in Year 9 on topics such as the role of colour, or design, concluded that only '*the few that are very interested might take on board the fact that "this will help me" ...*'.

The significance of individual aptitude as a determinant of effective learning was clearly illustrated during the pupil interviews. Some pupils referred to being '*good at art*'; another found science relatively easy – it seemed like '*common sense*' to her. A boy in Year 9 said the most personally important thing he had done during the term was to build '*a wee car*' in technology. A girl in Year 10 said she was finding the content of the music curriculum highly relevant to the theory she was working on in private music lessons.

Individual aptitude was highly significant in music. While a few pupils were convinced that music would play a major role in their lives, the majority appeared to be in sympathy with a boy who could not see himself '*in front of a piano in the future*'. In considering the overwhelming evidence in the survey results for the irrelevance of music, it may be worth noting that a relative lack of individual aptitude can be uncomfortably exposed in the often unwelcome opportunities for individual performance encountered in music lessons. From the observations, it was clear that, at 13 or 14, a number of pupils felt acutely embarrassed at singing or even playing an instrument on their own in front of the class, and some of them identified this ordeal in their interviews as the reason for disliking the subject. A music teacher remarked that asking boys, in particular, to sing at this age, when their voices could be breaking, was inappropriate.

The relative contributions of relevance and enjoyment to effective learning

An apparent dissonance emerged between pupils' and teachers' views on the respective contributions of relevance and enjoyment to effective learning.

A significant minority of teachers argued that enjoyment was more important for effective learning than the need for relevance. Some history teachers believed that the perceived 'irrelevance' of the past was less significant than harnessing their pupils' enthusiasm for 'hands-on' activities in generating effective learning. An IT teacher observed that '*manipulating databases*' was not '*attractive*' to most pupils, and that consequently, although they might '*end up being able to do it*', it would not be '*something that they would retain*'. According to the survey results, IT was consistently highly rated by pupils for its vocational relevance, and their interview responses testified to its effectiveness in motivation, irrespective of levels of enjoyment.

For many pupils, vocational relevance was more significant than enjoyment. A preoccupation with the need to find a job and earn a living appeared to overshadow enjoyment of subjects related to individual interests. A girl in Year 10 enjoyed learning about the war in history, but did not think it was important because it would not be '*useful for what I want to be when I am older*'. A Year 9 boy dismissed the personal importance of RE: '*I don't think RE is useful, but I like doing it and it's good to know for me.*'

This apparent disregard for the value of personal preferences applied particularly to expressive subjects, and most frequently to art. Although many pupils said they enjoyed activities such as painting and modelling, they seemed to believe they were unimportant. A Year 7 pupil observed '*I wouldn't really do art*'; a girl in Year 9 asserted '*I don't really need to draw a picture of a fish*'. Such persistent references to the relative unimportance of the arts suggest a clearly demarcated division in many pupils' minds between different areas of the curriculum which they construct from messages about relevance assimilated in school.

The relevance of the curriculum as a whole

Pupils' views on what was or was not useful, relevant or important often illuminated their perceptions of the curriculum as a whole. The account of the concept mapping task in Chapter 3 demonstrated that at least two-thirds of the pupils who participated in this exercise conceptualised the curriculum in a way which encouraged them to 'break it up' rather than to make it 'cohere'. They perceived it either in 'images of value and usefulness' or in 'images of practical and academic curricula'. The tendency to split the curriculum in this way corresponds to a considerable extent

with the tables above, in the way in which the academic subjects (with PE and, in Tables 5.1 and 5.2, home economics) tend to occupy the top half of the ranking order, while the arts are clustered at the bottom. This pattern is at its most extreme in the polarisation of subjects displayed in the table for vocational currency.

The interview responses reinforced the impression that a substantial majority of pupils compartmentalise the curriculum into various categories according to their perceived value in helping them achieve success in academic and vocational terms. Grammar school pupils showed a marked tendency to categorise the curriculum in this way. One Year 10 girl explained how individual aptitude could enhance the relevance of '*practical*' subjects: '*There are subjects like music ... the practical subjects, like music and art and HE, if you are good at them, then they will be important ... because you are satisfied by what you are doing.*'

However, she distinguished these subjects from those that she believed were of general importance: '*The three main ones ... English, science and maths ... you definitely have to try and be good at them, definitely.*' Another girl categorised subjects according to whether they involved '*any writing*'. She particularly liked art and sport, the 'practical subjects'. A third grammar school pupil appeared to have a 'mental map' of the curriculum with decisive boundaries. However, he was forced to review and realign these divisions in a reappraisal of art and its possible instrumental value:

> *Sometimes, art can be useful for drawing stuff. I have changed my mind. Art can be pretty useful, but the rest of them, I don't think would be very useful. I don't think I am ever going to need to play the recorder again.*

Here '*the rest of them*' suggests other 'practical' subjects as well as music, all of which he appeared ready to dismiss.

According to a number of teachers, a significant minority of pupils quite frequently ask '*why are we doing this?*' The initiative to question was seen to vary according to age, ability and temperament. Some practitioners implied that the capacity for discerning relevance was related to maturation: '*You can't put an old head on young shoulders, can you?*' A PE teacher claimed that '*some children will just take it as gospel*', whether they are enjoying their work or not, merely because they think they are expected to do so. A geography teacher suggested '*the more clued-in ones ... might say "I don't understand ... I don't see the point in this"*'.

A teacher in a secondary school commented that while some pupils expected to be able to relate their learning to a wider purpose and/or to a well-organised sequence of continuity and progression, others seemed willing to accept it so long as it was enjoyable:

> *... some students would naturally be more questioning, and they want to understand where they are going and 'what we are doing next', and 'why we are doing this' ... I think we have quite a large percentage of students who will quite happily sort of ... if they enjoy doing it, maybe they are not even aware of how much they are maybe learning, but they do pick it up.*

The evidence would seem to suggest that, while a minority of pupils regularly question the validity of their learning, mechanical compliance may prevail among the majority.

5.7 Summary and conclusion

The foregoing discussion has demonstrated the belief implicit in many pupils' perceptions that academic and vocational relevance are the most powerful incentives for engaging with their learning. Some pupils' comments on the independence of relevance from enjoyment are striking.

Youngsters here referred to the relevance of personal development and individual interests much less frequently than to academic and vocational attainment; they apparently attributed little importance to activities involving personal interests and abilities unless they coincided with these explicitly collective goals. The results confirm that individual pupils do perceive relevance in other subjects; however, the vagueness of the responses relating to general knowledge, and the tendency not to expand on expressions of personal enjoyment – '*I just like it*', '*it's good fun doing it*' – suggested that personal or general relevance, irrespective of any perceived value, might be more difficult to articulate.

From the evidence here of the crucial relationship between perceptions of achievement and self-esteem, personal development may not so much diminish in importance over the Key Stage (as suggested by the paucity of responses for this category) as become subsumed by academic and vocational relevance. A sense of achievement was most frequently perceived and experienced by pupils here in academic terms. And by Year 10, academic relevance acquired prime status as the means in the present towards all-important future vocational goals. The indefinite nature of the relatively few responses which attempted to articulate personal development suggested that pupils were unpractised in this kind of thinking and discussion. Moreover, the emphasis of the interviews on 'subjects' may have inevitably directed them towards their customary view of the curriculum dominated by the balance of subjects in the weekly timetable. (It is possible that the semantic differential items in the questionnaire may have produced the same effect.) Thus, the potential of non-academic, non-vocational areas of engagement, as credible sources of achievement and self-esteem, appeared to have been marginalised in a collective thrust towards utilitarian goals. In both the quantitative and qualitative data, this narrowing perspective was most starkly defined in the responses from grammar schools.

The attitude of one grammar school pupil epitomised the prevailing interpretation of the relevance of the curriculum. He could not imagine art would '*ever be useful*', even though he enjoyed it and thought he was good at it. He claimed he only spent five minutes on art homework, whereas he studied hard for his academic subjects '*to make sure*' he '*made the grade*'. His priorities succinctly highlight many pupils' susceptibility to the messages implicit in the specified curriculum and accompanying assessment system.

According to this study, these implicit messages have convinced youngsters that academic subjects are the most important, both within school and in the outside world. Thus, they perceive proficiency in these areas as the most relevant not only to credible success in the present and the future, but also for their current and continuing need for self-esteem. Individuals whose strengths may lie elsewhere, in practical subjects, in PE, or in the arts, are consequently at a disadvantage, as their alternative proficiencies may be perceived to have less value.

According to Gardner (1993), *'the purpose of school should be to develop intelligences, and to help people reach vocational and avocational goals that are appropriate to their particular spectrum of intelligence'* (p. 9). The NIC prescribes that all pupils are entitled to a *'broad and balanced curriculum'*, in order to ensure they are equipped for the *'opportunities, responsibilities and experiences of adult life'*. Thus, they are entitled to equal access to personal fulfilment in vocational and 'avocational' terms.

It seems, from the evidence here, that many pupils need to be convinced, firstly of the value *per se* of experiences which are personally appealing and rewarding, and, more urgently perhaps, of the value of what they have to offer as individuals. Given the meagre value attributed here to 'irrelevant' and 'unimportant' subjects, particularly the creative arts, perhaps a more explicit recognition of the value of the whole spectrum of individual 'intelligences', and a determination to reward curriculum proficiency in each of them in equal measure, might nurture the self-confidence and generate the engagement which would impel pupils of their own accord to seek challenges in their learning.

6. MANAGEABILITY

6.1 Introduction

Hargreaves (1991) related 'manageability' to learning specifically in terms of quantity. He defined it as concern '*with the amount of knowledge and skills that can be put into the curriculum: if there is too much content, in relation to the allocated time, the curriculum is unmanageable for teachers and pupils*'. In order to accommodate perceptions of the learning experience from the data here, a second, and critically important, kind of manageability was identified: the level of work in terms of its conceptual difficulty.

6.2 Curriculum as specified

Teachers believed that while the level of difficulty can be controlled to some extent by both planning and mediation, the sheer quantity of work relates much more directly to what has been externally prescribed. Subject teachers interviewed were asked two separate questions on manageability: firstly, whether they felt the NIC was perceived by pupils to be manageable or difficult to manage in terms of workload, the sheer amount of work; secondly, whether they felt the NIC was perceived by pupils to be manageable in terms of the level of difficulty.

6.2.1 Amount of work

The total amount of work across all subjects was often seen to be particularly daunting for pupils in Year 8, who had to acclimatise to the new environment and timetabling system of post-primary school, in addition to what was expected of them in the classroom. According to the NIC: '*What is specified will allow teachers considerable freedom in the way in which they teach ... In* [compulsory] *subjects, as in others, teachers will be free to range more widely for some or all pupils.*' However, although there was general acknowledgement of the 'improvements' made in the revised orders in relation to workload, in both grammar and secondary schools, some teachers still felt that the curriculum within their own subjects left little room for manoeuvre. At the Year 10 stage, a curriculum deputy said that in spite of '*some streamlining*', which had made the teachers '*happier*', there was still '*a lot*' that pupils had to cover. In the same year, a curriculum deputy at another school observed that it was still '*very tight*' and consequently '*hard to introduce anything new*', such as the scheme for social and political education currently being piloted within the history department.

According to Year 7 teachers, pupils were overloaded in primary school. Many teachers pointed out '*this great pressing weight of work*' is experienced most acutely in Years 6 and 7 in preparation for the Transfer Test, and thus to some extent, cannot be directly related to the NIC. However, at the time of the interviews, while it was generally agreed that in some subjects the revised orders offered teachers '*a bit of leeway*', density of content was still causing concern in science, geography and history.

At post-primary schools, the data revealed that workload again became a problem for particular subjects. In some cases, it seemed that teachers believed that there was too much work prescribed *per se*. More frequently, they really seemed to want more time to be available, in order to cover the material more thoroughly, and to enable them to create opportunities to make it more enjoyable and more interesting. History, technology and geography were perceived to be the most demanding in terms of heavy workloads. The Year 8 maths curriculum was also seen to exert considerable pressure on both pupils and teachers.

6.2.2 Level of difficulty

Although Key Stage 3 teachers frequently believed that the level of conceptual difficulty was *'just about right'*, certain topics or activities within particular subjects were perceived to cause difficulties for certain groups of pupils. A Year 8 geography teacher referred to a recent micro-climates project where she had almost felt she was *'teaching maths'*; after repeated analysis and explanation, she felt that the pupils still did not understand the *'basic concepts'*. Given the reference above, relating to the unmanageable pace at which pupils are required to assimilate *'basic concepts'* in maths in Year 8, it seemed that a more manageable workload and consequently a more sympathetic pace might allow them to acquire the cross-curricular numerical skills they needed for other subjects.

In some subjects, it was suggested that although the amount of work in the curriculum was onerous for pupils to manage, the content did not stretch them intellectually enough to engage them in a satisfying challenge. In one school, a Year 8 science teacher admitted she was *'wondering'* whether the work was *'too easy'*, because the standard of the pupils' work was so consistently high. A Year 10 physics teacher in the same school observed that the curriculum in his subject was *'certainly easier than it was ... now the mathematical thing* [speed time graphs] *has been taken out of it'*. In another school, a Year 9 geography teacher described how hard it was for teachers to *'stagger the workload'* for fully mixed-ability classes, and how they had to *'source extra work for the more able from Key Stage 4 textbooks'*.

Differentiation proved to be a cause of considerable and continuing concern to a large number of teachers, particularly, but not exclusively, in schools which covered the full range of academic ability.

6.2.3 Differentiation

While devoting relatively generous amounts of space to the structure and themes of the curriculum in general, and to the Key Stages, Attainment Targets and Programmes of Study, the NIC allocates a single closing paragraph to differentiation:

> *Bearing in mind the wide range of levels of attainment to be expected at all ages, schools will need to consider carefully how best to provide for the differing needs of individual pupils. It is intended that pupils should progress at their natural rate and it will be necessary to take account of this in schemes of work for all classes.*

In practical and expressive subjects, such as art and music, although the specified curriculum itself was not differentiated according to academic ability, teachers agreed with a home economics teacher who affirmed that there was enough flexibility to *'tailor the content ... to suit the ability of the children in question'*.

Manageability in other areas could be less satisfactory. A Year 10 technology teacher at one school believed that while making an electric circuit was *'totally appropriate'* for the entire class, ' *... the theory aspect ... the physics'* of how it works was *'aiming a wee bit high'* for *'some of the lower pupils'*. Elsewhere, technology presented similar difficulties for lower-attaining Year 9 pupils in a mixed-ability class; it was important for every individual *'to have an outcome'*, but at the same time, to make it manageable (for teachers), they all had to do a similar type of project.

Modern languages were seen to cause serious difficulties for lower-attaining pupils. While a French teacher in one school said that his high-attaining Year 8 pupils regarded French as *'a softer option'* than maths because of *'the oral emphasis'*, a head of French elsewhere explained that the requirement to teach in the target language caused particular problems throughout Key Stage 3, *'from the middle band downwards'*. According to this interviewee, it restricted the teacher's professional capacity to stimulate any interest and create a teacher–pupil relationship conducive to learning: *'Target language in some ways has depersonalised the teaching because, if you're attempting to use target language, you're obviously minimalising your personality.'* He added that the requirement to focus on the *'linguistic objectives'* also effectively limited the nature of the background material he was able to communicate to lower attainers and thus their potential engagement with it. Pupils across the full range of ability reported problems with lessons conducted entirely in the target language; they said the teacher talked *'too fast'* and they could not understand what they were expected to do.

Differentiation was a recurring theme, both in schools where pupils were set by academic ability, where it related primarily to planning, and even more insistently in relation to both mediation and planning in schools where mixed-ability teaching continued, in some subjects, throughout the Key Stage.

6.3 The curriculum as planned

6.3.1 The pupil perspective

Some pupil perceptions relating to the organisation of the timetable seemed to complement the views of teachers. The pupil responses suggested, particularly in Years 9 and 10, that they were clearly capable of critical reflection on the way curriculum planning affected their learning. The two-week timetable, for example, was identified by pupils in schools where it prevailed as a source of unmanageability, because the long gaps between consecutive lessons in some subjects, such as art, disrupted continuity and imposed disproportionate amounts of homework. Another timing problem occurred when pupils had to travel long distances between lessons; one boy in Year 8 observed that time was always *'taken off'* their geography lessons because they took place *'right down at the mobiles'*; as he said,' *... by the time you get there and get settled'*, a significant part of the lesson was lost.

Homework was frequently used by pupils, as it was by teachers, as a measure of whether the amount of work was manageable or not. A Year 8 pupil affirmed that the total amount of work was *'just about right, because they don't give you too many homeworks'*. Large and frequent amounts of homework in particular subjects

were very unpopular. A boy in Year 9 admitted: '*It's a wee bit too much because you get too much homework and it's hard for you to do it all.*' Unmanageable amounts of homework were perceived in at least one school to be a by-product of a six-day timetable. A geography teacher explained how this could antagonise the pupils concerned:

> *Whenever we work on the six-day timetable ... some weeks you might only see them twice a week and so definitely it is quite tough ... because we have to give them more for homework than you would really like to give and ... they wouldn't be very enthusiastic about that.*

With regard to homework, a strong preference for balance and proportion emerged from the interviews. Pupils evidently felt that the amount of work was much more manageable when homeworks were evenly spaced and shared between the different subjects in proportion to their perceived importance. A Year 9 pupil expressed exasperation at his experience of unpredictability: '... *but then other times, you get a small homework in that subject* [learning vocabulary] *and a bigger one in another one.*' In one school, a girl in Year 10 suggested that the teachers '*should have a timetable on which day they should give their class a homework*'. Homework will be subject to further discussion in relation to the curriculum as experienced.

6.3.2   The teacher perspective

Amount of work: too much work or not enough time?

In subjects where the workload was most frequently perceived to be difficult to manage (e.g. science, history, geography and technology), the wish for further time was a recurring theme, and where the curriculum was seen to be unduly cumbersome, manageability for teachers became as pressing as manageability for pupils. Generally, teachers seemed keen to retain what had been prescribed for their subject, rather than to leave anything out, but a significant number of them would have liked more flexibility.

At one school, a curriculum deputy acknowledged that although in most areas of the curriculum they were '*coping*' quite well, the science department was unhappy with the amount of time at their disposal. A geography teacher elsewhere drew attention to a problem that emerged in various subjects across all schools. Because of the heavy workload, teachers had found it necessary to set more homework than they '*would really like to give*' – a policy which was very unpopular with pupils.

Lack of time for practical subjects could be a source of frustration in schools where academic attainment was pre-eminent. As one technology teacher explained:

> *Time is of the essence in a practical area. ... It's a hands-on thing. ... It's not me giving the information: you suck it all in and then you regurgitate it all out. It's much, much more than that. It's a whole interaction. It's a different kind of teaching. So you need time and space and the opportunity to tease all that out.*

By contrast, a technology teacher in a different school expressed approval of the arrangements his department had been able to make within their allocation on the timetable: '*The fact that they are getting things finished sort of indicates that the timing must be fairly near right.*'

Differentiation: at planning level

Teachers across all subjects commented on the need to differentiate specified curriculum content through grouping, through departmental planning and classroom organisation. In one school, pupils were '*streamed*' or '*banded*' throughout Key Stage 3. A history teacher noted that '*you have to plan your lessons completely differently*' for each band and still be prepared for a range of ability within each class.

A history teacher in another school, where Year 8 were taught in mixed-ability classes, admitted that he tended to '*pitch it towards the middle*'. This worried him, because he often felt '*the better ones*' and '*the weaker ones ... might not have got as much out of a lesson*' as they could. The department found it hard to make time to '*sit down and ... step questions to try and cater for each level*' for every year group.

In a third school, mixed-ability teaching prevailed in Year 8; from Year 9 pupils were set only for maths, science and English. That pupils were accustomed to differentiated tasks was evident from the observation of a French lesson in which a mixed-ability Year 9 class was being given a test. As the test papers were being distributed, the teacher announced: '*There's no difference in the tests today.*' She drew their attention to a second test paper, '*Sheet Two*', which offered an extension of the test for those who finished the first sheet early, and sat and worked with one boy who needed extra help.

Bearing in mind the implications for low attainers of teaching in the target language, it is interesting that in this lesson the teacher instructed pupils in French first – '*Une minute pour terminer, pour finir*' – but added the essence of the sentence in English, so that everyone knew what was happening. At the end of the lesson, she asked the class in general: '*C'est difficile ou facile?*' Their mixed response would seem to confirm the need for flexibility in the modern languages curriculum.

In schools embracing the full ability range, unless the work was very carefully differentiated, and/or extra classroom support was regularly available, mixed-ability classes were frequently perceived as a source of frustration for individual teachers and pupils.

In respect of planning, comments on the workload related to insufficient teaching time and the implications for the amount of homework. Concerning the level of difficulty, differentiation was seen to be essential for manageability in schools that included the full range of ability.

6.4   The curriculum as mediated

6.4.1   The pupil perspective: mediating the level of difficulty

In respect of mediation, pupils' comments from all four year groups focused on the level of difficulty. They referred repeatedly to the importance of unrestricted access to explanation from the teacher, and to the ability of the teacher to create and sustain an atmosphere which was at once calm, purposeful and reassuring.

The importance of allowing time for explanation

The ideal pace for assimilating difficult or unfamiliar material was defined in one pupil's account of a maths lesson: although she found maths '*quite difficult*', she

felt it was manageable because the pace allowed pupils '*to ask several times to have it explained until we get it and we understand*'. In a substantial majority of cases where subjects were said to be '*hard*', pupils associated their experience of difficulty with an inappropriately rapid pace, which curtailed opportunities for extended or repeated explanation. A number of pupils of all abilities described how they had been too afraid of being scolded by the teacher or ridiculed by the rest of the class to ask a teacher for attention. Sometimes, an explanation intended to clarify had only confused; a Year 9 pupil had difficulty with physics because the teacher explained it '*in a lot of detail*' and she found it '*hard to understand*'. It may be worth noting that the view that the teacher did not '*explain well*' occurred more frequently among the Year 10 responses than in those for previous years. By Year 10, a combination of developing maturity and more challenging assignments may propel pupils to engage in a critical appraisal of the learning experience which younger pupils are less ready to articulate.

The uncompromisingly intellectual content of modern languages was repeatedly identified by pupils in relation to the importance of adapting the pace of a lesson to the nature of the content. Lessons conducted entirely in the target language were frequently a cause of distress. A high-attaining pupil confided: '*Sometimes, our teacher just starts talking in French and she might think we know it, but we don't really because ... sometimes she doesn't explain things very well and it's hard to learn a new language.*' Another high-attaining pupil, in a school where Year 10 pupils felt particularly overworked in French, underlined the importance of checking pupils' understanding before leaving them to work on their own. He asserted: '*It's just so hard to finish homework sometimes, because you don't get enough help with it and I am not good at it, so it's hard.*' Given the fact that in the questionnaires, pupils of all abilities identified French as the hardest and most labour-intensive of all subjects, it seems that mediation in this subject may need to be reviewed.

Classroom atmosphere

Researchers in England (Maden and Rudduck, 1997) have noted that children have '*firm ideas on how to improve their education*'. They found that pupils would like '*commitment to schoolwork to be more legitimate among their peers*' and noted that currently pupils do not see working and talking about work as '*cool*'. The creation of an atmosphere both purposeful and reassuring was seen by many pupils in this study as a highly significant factor in their ability to concentrate and to feel that they would be able to accomplish the tasks required. Some pupils unequivocally referred to the importance of classroom management in securing all aspects of manageability. One girl believed the amount of work they were given frequently depended on the dynamics set in motion by a combination of the attitude of the class as a whole and the individual teacher's mood: '*Sometimes you get a lot of work and sometimes you don't. It just depends on what sort of mood the teacher is in and what way the class has been acting.*' Another pupil remarked that ' ... *if the teacher's in a bad mood and the class has been very noisy*', they would not finish what they should have done in class and they would be given extra work on top of their homework. Although the majority of comments relating to class atmosphere were concerned with a lack of purpose, perceived disorder, disruption or an unacceptable amount of noise, rigid classroom control was regarded as equally undesirable. One high-attaining boy found it particularly '*hard to concentrate*' in maths: '*The boredom of it ... it's just so silent and stuffy, just boring and stuffy ...*'

6.4.2 The teacher perspective

Teachers' comments on manageability at the level of mediation will be discussed firstly in terms of the amount of work and secondly in terms of differentiation.

Amount of work

Although practitioners frequently believed that the total amount of work for pupils to cover during a year, or across the whole Key Stage, was hard to manage, their comments suggested that they deployed their professional expertise and '*would adapt*' to make the task less '*onerous*'.

'Just the right amount'

Both Year 7 and post-primary teachers frequently indicated the close relationship between the amount of work and the level of difficulty. A home economics teacher depicted the need for teachers to be flexible in the timing of particular tasks. Different individuals, as an English teacher acknowledged, '*...work at different speeds and do different amounts of work*'; a task may not be '*hard*', but as a Year 7 girl explained, it may be '*hard to get done in the time*'.

Teachers who felt the workload was '*just about right*' often used words denoting small quantities to describe the way they broke down the learning so that it would not be overwhelming. A German teacher said she '*gave stuff in fairly small chunks*', and a head of RE referred to '*manageable bites*'. He added that pupils soon '*catch on that the time factor is largely under my control*'. The implication seemed to be that they find this reassuring, but it unwittingly depicts the pressure of an overloaded curriculum. Moreover, the portrayal of pupils by the three teachers here, as necessarily passive recipients of '*chunks*' of information, may seem a disturbingly restricted experience of learning.

The importance of a flexible curriculum

The comments of a French teacher stressed the value of freedom within the curriculum to allow teachers to deploy their creativity. He believed that a flexible approach to the curriculum, and a spontaneous response to the pupils' enjoyment, opened up a much broader linguistic and cultural perspective than strict adherence to any prescribed topics. By contrast, a geography teacher wished she had similar flexibility to respond spontaneously to '*... the Olympics ... or if a volcano erupts ... capture the moment ...*' instead of '*delivering this medicine, get it shovelled down*'. Where the weight of the workload dictated a relentless pace, the possibilities for spontaneity and enjoyment were seen to disappear altogether.

Differentiation: at the level of mediation

Differentiation was seen to be as significant for mediation as it was for planning, especially, though not exclusively, in schools which covered the full ability range. As an issue for mediation, it took conspicuous precedence over both workload and level of difficulty. Whatever system was in place, many teachers highlighted the importance of individual imagination and flexibility in responding to the diversity of pupils' needs.

A history teacher of a Year 9 mixed-ability class summarised the conflicting responsibilities involved in adapting activities to suit individual variations in pace: '*People at different levels in the class ... you have extra work for those who are*

finished and that sort of thing – that's hard, sometimes, because the bright ones can lose initiative if they don't have work to do – it's hard.'

Observation of a geography lesson exposed the challenge of mixed-ability classes in practice. The teacher asked the pupils to draw a map of Kenya, to add a key and then answer the questions in the textbook. Some of the class settled down to work immediately, but she had to amplify her instructions several times in response to individual queries. She explained later in an interview how hard it was '*to stagger the* [specified] *workload*' in order to stretch the most able and accommodate the low attainers. In another school, an English teacher explained the highly competitive atmosphere could lead to pupils' being '*teased*' or '*taunted*' if individuals were divided into groups that they perceived to be differentiated by ability.

Teachers frequently distinguished between differentiation '*by task*' and '*by outcome*'. A careers teacher had developed a range of materials to use for each topic and she would '*pitch*' the work according to the level a particular band could manage. In the arts and PE, the aptitude of individual pupils meant that differentiation by outcome was to some extent inevitable.

Although generally speaking teachers registered that the revised orders had led to some improvement in terms of planning and mediation, many nevertheless expressed serious concern in relation to differentiation. Perceived discrepancies between the curriculum as specified and the needs of individual pupils surfaced repeatedly throughout the teacher interviews. The following two sections, on the curriculum as experienced and internalised respectively, will reveal that this imbalance was reflected in the perceptions of the pupils themselves.

6.5 The curriculum as experienced

This section will explore specific aspects of manageability in relation to the experience of learning as it took place in the classroom. Accordingly, analysis of the data from the questionnaires will be complemented by evidence from the interviews in an attempt to identify pupils' priorities in terms of conceptual difficulty and the total amount of work, including homework.

It must be noted that pupils in all four year groups displayed a marked reluctance in the interviews to indicate directly that they found some of their learning unmanageable. Initially, they frequently asserted that the amount or the level was '*just about right*'; however, when encouraged to consider manageability in relation to specific subjects, the majority qualified their responses and expressed dissatisfaction with at least one of them. This must be borne in mind in considering responses for the category '*just about right*', in relation to the questionnaire results.

In respect of the questionnaire, the two separate types of manageability were identified in Item 2, the semantic differential question. For both the level of difficulty and the amount of work, the first table will present the overall mean scores for each subject, together with the mean scores disaggregated by type of school. A second table will present the overall mean scores for each subject disaggregated by attainment grouping for all three year groups, according to the rank order for Year 10. Subjects not appearing in the tables have been excluded because the numbers taking them were relatively low.

6.5.1 Level of difficulty

The first pair of antonyms in Item 2, '*hard ... easy*', focused pupils' attention on the level of difficulty they perceived in each of their subjects. The following table presents the results for Item 2 for the level of difficulty for Years 8, 9 and 10. For each year in turn, the overall mean scores are given for each subject in rank order, together with the mean scores disaggregated by type of school.

Table 6.1 **Pupils' perceptions of level of difficulty by type of school and year group**

1 = hard; 5 = easy

(i.e. the lower the mean, the greater the perceived difficulty)

Subject	Year 8 Overall mean	Sec. mean	Gram. mean	Year 9 Overall mean	Sec. mean	Gram. mean	Year 10 Overall mean	Sec. mean	Gram. mean
French	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4
Maths	3.0	3.0	2.9	2.7	2.8	2.6	2.7	2.8	2.6
Science	3.1	3.1	3.0	2.8	2.9	2.7	2.7	2.7	2.7
History	2.9	2.9	2.9	2.8	2.9	2.7	2.8	2.9	2.7
Irish	2.7	2.6	2.8	2.7	2.9	2.6	2.8	2.8	2.7
English	3.1	3.1	2.9	3.0	3.0	2.9	2.9	2.9	2.9
RE	3.0	3.1	2.9	3.0	3.0	3.1	3.1	3.1	3.2
Geography	3.0	3.0	3.0	3.1	3.1	3.0	3.2	3.1	3.3
Technology	3.1	3.1	3.2	3.1	3.1	3.1	3.2	3.1	3.2
Music	3.3	3.5	3.1	3.3	3.4	3.0	3.2	3.3	3.0
Home economics	3.3	3.3	3.4	3.3	3.3	3.3	3.3	3.3	3.4
Art	3.5	3.5	3.4	3.4	3.5	3.4	3.3	3.3	3.4
IT	3.9	3.8	4.0	3.8	3.8	3.7	3.6	3.6	3.7
Drama	3.7	3.6	3.7	3.6	3.6	3.6	3.7	3.7	3.8
Health education	3.8	3.7	4.0	3.7	3.6	3.9	3.7	3.8	3.6
Careers education	–	–	–	–	–	–	3.7	3.6	3.8
PE	4.1	4.1	4.1	4.0	4.0	4.0	3.9	3.9	4.0
Overall mean	*3.3*	*3.3*	*3.3*	*3.2*	*3.2*	*3.1*	*3.2*	*3.2*	*3.2*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

The salient findings from the table above are as follows:

• A similar overall pattern was seen to recur from year to year: French was perceived to be the hardest subject, while the practical and expressive subjects were regarded as the easiest. Though not shown here, it is also worth noting that art and music were invariably susceptible to the highest levels of standard deviation, suggesting the role of personal interest, aptitude and home background in these subjects.

• Perceptions of easiness were consistently expressed in more extreme terms than those for difficulty. This finding may to some extent derive from perceptions of being '*underworked*' in '*easy*' subjects. Alternatively, it may be a sign that some pupils were trying to protect their self-esteem. The frequent use in interviews of qualifying phrases such as '*a wee bit hard*' or '*quite hard*' suggested that some pupils might be unwilling to acknowledge just exactly how difficult their learning could be.

• Although most subjects appeared to retain about the same level of difficulty in Year 9 as in Year 8, maths and science both seemed to become much

harder in Year 9 and French slightly harder. In Year 10, French and science were seen as slightly harder than in Year 9. The new 'subject', careers education, was ranked among the easiest, possibly because, as one head of Year 10 observed, careers education involves very little writing.

- The disaggregated scores showed that, in Year 8, grammar school pupils found more subjects relatively difficult than their secondary school peers. Although the gap closed in this respect over the next two years, grammar school pupils in Years 9 and 10 found the hardest subjects (French, science, maths and history) harder than secondary school pupils.

- With regard to gender (not shown in the table), the scores suggested that perceptions of easiness were closely associated by both sexes with perceptions of traditional gender relevance. However, an interesting divergence arose in relation to maths in Year 10: whereas in previous years, boys had found maths significantly easier than girls, in Year 10 the scores were much closer together.

The table overleaf presents the overall mean scores for each subject disaggregated by attainment grouping for all three year groups.

The salient findings from Table 6.2 are as follows:

- Taking a score below 3.0 as an indication of difficulty, it seems that in Year 8 many pupils found the majority of their subjects relatively easy. As one high-attaining pupil pointed out: '*It would be more fun if it was harder. You get bored whenever it is too easy.*' In Year 9, higher-attaining pupils found slightly more subjects more difficult than the other two groups, particularly English, science, history and Irish. By contrast, in Year 10, while the number of subjects perceived to be relatively difficult increased slightly for lower and middle groups, the figure for the higher group remained constant.

- In Years 8, 9 and 10, French was persistently identified as the hardest subject by all three attainment groups, except for the Year 8 mid-attaining group who nominated Irish as the hardest. In Year 8, it was hardest for the lower group, relative to the other two groups. A head of French noted the demotivating impact on low attainers of conducting lessons in the target language: '*I think these children need to be ... really, you need to be a play actor in many ways for them, or at least to be able to cajole them and persuade them through English ... to use your own native language ... to motivate them.*' From year to year, however, perceptions of increasing difficulty in French were most forcefully expressed by high attainers.

- In maths, the rise in the level of difficulty from Year 8 to Year 9 appeared to be quite marked, especially for low and high attainers – though the level of difficulty in maths did not perceptibly increase from Year 9 to Year 10.

- The results for science reveal the general pattern for high attainers in Year 10: perceptions of a noticeable leap in the level of difficulty from Year 8 to Year 9 and then no discernible change from Year 9 to Year 10. Since the level of difficulty in science increased slightly from Year 9 to Year 10 for the other two groups, it could be inferred either that high attainers were introduced to more challenging areas of the curriculum earlier than their peers, or that the mediation of more sophisticated material was relatively uncompromising.

Table 6.2 Pupils' perceptions of level of difficulty by level of attainment and year group

1 = hard; 5 = easy
(i.e. the lower the mean, the greater the perceived difficulty)

Subject	Year 8 Overall mean	Year 8 Low group	Year 8 Mid group	Year 8 High group	Year 9 Overall mean	Year 9 Low group	Year 9 Mid group	Year 9 High group	Year 10 Overall mean	Year 10 Low group	Year 10 Mid group	Year 10 High group
French	2.7	2.6	2.7	2.8	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.4
Maths	3.0	3.1	2.9	3.0	2.7	2.8	2.7	2.7	2.7	2.8	2.7	2.7
Science	3.1	3.0	3.1	3.0	2.8	2.9	2.9	2.7	2.7	2.8	2.7	2.7
History	2.9	2.9	2.9	2.9	2.8	2.9	2.9	2.7	2.8	2.8	2.8	2.8
Irish	2.7	2.7	2.6	2.8	2.7	3.0	2.8	2.6	2.8	3.0	2.7	2.7
English	3.1	3.1	3.1	2.9	3.0	3.1	3.0	2.9	2.9	2.9	2.9	2.9
RE	3.0	3.1	3.0	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.0	3.2
Technology	3.1	3.1	3.1	3.2	3.0	3.0	3.2	3.1	3.2	3.1	3.2	3.2
Geography	3.0	3.0	2.9	3.0	3.1	3.0	3.0	3.0	3.2	3.0	3.2	3.3
Music	3.3	3.5	3.3	3.2	3.3	3.4	3.3	3.1	3.2	3.4	3.2	3.0
Art	3.5	3.6	3.5	3.4	3.4	3.5	3.4	3.4	3.3	3.3	3.3	3.4
Home economics	3.3	3.3	3.3	3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.4
IT	3.9	3.8	3.8	4.0	3.8	3.7	3.8	3.8	3.6	3.6	3.6	3.7
Drama	3.7	3.7	3.7	3.6	3.6	3.7	3.6	3.6	3.7	3.7	3.7	3.7
Health education	3.8	3.8	3.7	3.9	3.7	3.6	3.7	3.9	3.7	3.4	3.7	3.9
Careers education	–	–	–	–	–	–	–	–	3.7	3.5	3.7	3.7
PE	4.1	4.1	4.1	4.0	4.0	4.1	4.0	3.9	3.9	4.0	3.9	3.9
Overall mean	3.3	3.3	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

- The questionnaire findings recorded for the amount of work revealed perceptions of a similar levelling off for high attainers in Year 10, in terms of the workload, both in class and for homework. Taken with pupils' references in the Year 10 interviews to the amount of time spent preparing for the Key Stage 3 tests, rather than learning new material, it seems that in Year 10 a significant number of high attainers needed a fresh challenge. In one school, a high-attaining boy observed that '*maths has been a bit too easy in some areas; I mean I was flying away ahead of the class*', and his classmate agreed: '*I think I can go higher than what I am at the minute.*'

- Music, and to a lesser extent art, were regarded as easier than the majority of other subjects, but conspicuously easier by the lower than the higher group.

The emerging impression from these results is that high attainers registered both the most frequent and the most extreme perceptions of difficulty, especially in modern languages. Yet at the same time, their responses imply that in Year 10 a significant number of them felt they were not intellectually stretched.

The following discussion considers further evidence from the interviews which supports the findings from the questionnaire, and offers an insight into the effects of inappropriate levels of difficulty, and an inappropriate pace, on pupils' engagement with, and enjoyment of, the learning experience. The interview question relating to the level of difficulty asked whether pupils thought the work they had to do the previous term was '*at the right level*' for them, or whether they found it '*too hard*' or '*too easy*'.

In the interviews, as in the questionnaire, maths and modern languages were most frequently regarded as difficult subjects *per se*, perhaps partly because, however skilled the mediation, a certain amount of irreducible and intractable intellectual content remained. When asked about the level of difficulty in other areas, pupils often identified particular topics or tasks within subjects as hard or easy rather than the subject in its entirety. Additionally, in certain subjects, they acknowledged the role of individual aptitude or previous experience in speeding their way along the path prescribed.

'Too hard'

In general terms, the interview data corroborated the questionnaire findings that pupils found the curriculum increasingly difficult as they progressed through the Key Stage. French was usually 'hard' because it was '*new*'. In maths, on the other hand, it often depended on the nature of the topic. Accordingly, different individuals nominated '*algebra*', '*coordinates*' and '*areas*' as particularly demanding; one boy, aware of different priorities in different subjects, observed: '*Maths coordinates would be harder than geography coordinates, because you have to write it out in number form, kind of thing, and in geography you just write it out.*'

The Year 9 responses reflected the survey's indication that pupils were experiencing difficulty over a wider range of subjects than in Year 8. Subjects most frequently identified as 'hard' in Year 9 were maths, science and history. The difficulties in history seemed closely associated with the need to assimilate large quantities of information, which were '*difficult to remember*', and in science pupils frequently mentioned the '*chemical names*' (i.e. the periodic table). In Year 10, as one interviewee remarked: '*Come the third year, everything was like a wee bit harder.*' Maths and science again were conspicuously harder, as was modern languages

and, to a lesser extent, English. A boy confronted with the introduction of more arduous, written grammatical exercises in German reflected the diminishing enthusiasm for modern languages referred to earlier: '*I am starting to hate it. It's starting to go hard now.*'

(Too) easy

Pupils in Year 8 appeared to find their subjects considerably easier than in Year 9. However, a significant minority of Year 9 pupils found individual subjects or topics too easy. One girl remarked that geography was too easy '*... because it is more or less common sense, sort of*'. The questionnaire results showed that geography was consistently perceived to be relatively easy, across the three years, in spite of the heavy workload identified by geography teachers. In Year 10, it is worth noting that, in the interviews, although the number of perceptions of difficulty increased, there was no corresponding decline in perceptions of easiness.

The questionnaire results demonstrated the relative easiness perceived in practical subjects. Across all year groups, pupils frequently asserted that it was the absence of '*writing*' which made practical and expressive subjects less demanding. Some, however, recognised the effort of writing which involved '*thinking*' as opposed to copying. One boy said home economics was very easy because it involved copying off the board; a pupil elsewhere identified a similar lack of challenge in history: '*He would tell you it all and you would copy it down.*'

Practical and expressive activities were not universally seen as '*easy*'. Some had difficulty in technology, '*... designing stuff, coming up with your own ideas*'. This problem was noted by a technology teacher who believed 'design' itself was very hard to teach to pupils whose aptitude in this direction was very limited. Individual aptitude played a part in many cases, and easiness was frequently associated with enjoyment by the pupils concerned. One girl thought science was easy because for her ' *... it just comes naturally*'. Another pupil said English was easy because she was '*good at writing and spelling*' and she '*liked it*'.

When the content was felt to be '*too easy*', pupils admitted to a sense of dissatisfaction which, particularly for high-attaining pupils, could amount to severe frustration. One girl, who would have liked to have entered the Key Stage 3 tests at a higher level, had gained very high marks and seemed bitterly disappointed at being deprived of the chance to excel at the level above: '*I only got to do the level 6, which was tier B ... I never got the chance to try it and I would have liked to have tried.*'

Nature of task/topic

Pupils frequently associated the level of difficulty with the nature of a particular topic or task. As evident from the questionnaire results, most activities identified as 'hard' involved writing, which could include anything from answering questions or summarising new learning to creative composition. However, personal interest and self-confidence were also significant. One girl said using the drill in technology was the hardest thing during an observed day; another pupil nominated singing in music in front of the rest of the class.

The intrinsic manageability of particular topics or tasks was widely recognised by teachers. A maths teacher said her Year 10 pupils found algebra difficult, which made it less '*enjoyable*'. An English teacher identified poetry as a challenge for some pupils, especially in mixed-ability classes where '*the brighter ones*' tackled '*something a wee bit more complex*', while '*the weaker children*' kept to something

really basic, '*not properly a poem at all*'. An art teacher commented on the difficulty of working on a figure study, especially since it was so hard to reach the point where pupils could recognise any resemblance between their own efforts and the original.

Pace

Pace emerged as the central pivot of the learning experience. According to the interviews, it determined to a considerable extent the acceptability of the level of difficulty. Across all year groups, an inappropriate pace was the reason offered most frequently to explain dissatisfaction with the level of difficulty. According to the pilot study, teachers saw it as an important responsibility '*to present conceptual difficulty to all pupils as a challenge to gain their interest rather than as an experience threatening to undermine self-confidence and expose inadequacy*'. An inappropriate pace was invariably seen as stressful because it took the individual process of learning out of the learner's control.

'Too fast'

For many pupils, the ideal pace was one that they could set for themselves. A girl in Year 9 explained that she was able to finish the work set in maths because the teacher '*didn't give us any set amount to do, so you sort of started and saw how far you got*'. A Year 10 girl identified the problems of an irregular pace in maths: '*Sometimes he would go real fast ... he wouldn't spend much time on some things, but he would pay loads on another, instead of just giving it all even.*' The freedom to aim for a 'personal best' was something many pupils particularly appreciated.

'*If the lesson goes very quick, it's very hard to get focused on it and get it done.*' Reaching the point of understanding takes time, especially where unfamiliar material is concerned. An acceptable pace varies from one individual to another, according to aptitude, ability, temperament (self-confidence, conscientiousness), powers of concentration and familiarity with the matter in hand. Some pupils found a rapid pace quite stimulating; a boy in Year 8 enthused: '*Every two seconds* [the science teacher] *puts a different sheet up and stuff, but you get through it OK, it's good.*' But a substantial majority of pupils agreed that if the pace was too fast, it was detrimental to understanding. In some cases, youngsters said they were afraid to ask the teacher to repeat an explanation for fear of being exposed in front of their peers. This could be a particular problem for low attainers, whose lower level of understanding was penalised by the creation of an interruption in the sequence of explanation: '*If it goes fast, you might not understand it and then you would feel stupid if you have to ask, so you just sit there*' (male, Year 9). This boy was evidently not prepared to risk any damage to a vulnerable self-esteem.

A gentler pace also suited those who admitted to being over-conscientious, particularly high-attaining girls. One pupil said the teacher tended '*to be over-detailed in answers and go on for ages*'. According to both the interviews and the observations, some high-attaining pupils were frequently under pressure to conform to a pace that left them little opportunity to consolidate their learning.

An observed science lesson offered a revealing insight into the pace at which some high-attaining Year 9 pupils were expected to grasp a specific scientific principle. The researcher noted that the pupils wrote quickly and continuously while the teacher engaged the whole class in a rapid question and answer session to elicit the fact that there is more carbon dioxide in the air we breathe out than in the air we breathe in. On two occasions during the lesson, the teacher literally '*dictated*' the pace of the lesson and the pupils took notes.

The plight of the high-attaining pupils here corresponds with findings from Boaler's research (1998, p.4) into the detrimental effects of an unsympathetically rapid pace in maths on the morale of high-attaining pupils, girls in particular: '*Observations of high-set classes revealed that teachers often raced through examples quickly, giving students little or no space to think or understand, and reprimanded students who failed to keep up with the fast pace of the lessons.*' In schools where academic achievement was pre-eminent, the data suggested that high attainers could be under more pressure from a rapid pace in some of their subjects than pupils elsewhere.

'Too slow'

The data testified that a sluggish pace undermined enjoyment as effectively as one too fast, at all levels of ability. A Year 10 boy in the lowest band at a secondary school complained that there was '*not enough to do*' in maths, and that he was bored waiting for others to finish. Two high-attaining pupils, in different schools, depicted the tedium of repetition in French: '*... Dwelling on the one thing for far too long, we tend to go over a lot of things ... helpful in a way, but it sort of drags on.*'

High attainers often felt constrained by the need to move at the pace of the rest of the class. However, certain pupils of all abilities registered awareness of the role of differentiation in determining the pace at which you were taught. As one girl in a middle band pointed out: '*If I was in the top band, they would probably go faster with their work ... and I probably wouldn't be able to keep up with them.*'

The importance of 'getting things finished'

The personal importance of '*getting things finished*' was poignantly highlighted by a pupil in Year 7. She had missed the first part of a lesson because of choir practice, and vividly described her sense of frustration at being unable to finish her story: '*I didn't want to rush it. I was only half-way through when she said "Now, I want you to clear up". I would have liked to have got that finished, because it was quite good*' (female, Year 7). Her despair at being deprived of the opportunity to write her ideas down while they were fresh in her mind underlines the fact that in creative tasks, particularly, it may be impossible to recapture the spirit of initial enthusiasm in which the idea took shape. A boy in Year 10 seemed to share this feeling about art: '*In art the classes always go really fast and you would like more time to finish off your drawing, because the next day ... you might not do your drawing as good as the first time*' (male, Year 10).

Ensuring that work was completed was a priority for all teachers, in terms of covering the prescribed curriculum. In reflecting on what was important to pupils, an English teacher remarked that they '*put a lot of emphasis on the end result*'. Teachers of the most literally 'creative' subjects registered the keenest awareness of the personal importance to pupils of seeing a project through to the end; pacing a task to ensure a sense of achievement for every individual was a priority. A technology teacher judged that the workload for his Year 9 pupils must be '*about right*', because they all produced a project that they could '*take home and take certain pride in and say "It's finished; it looks good"*'. In the case of lower-attaining pupils, finishing a practical task may be even more crucial. A finished, or, more significantly perhaps, an unfinished product is visible and tangible. The sense of progress and achievement is explicit in the process; this may be particularly encouraging to individuals for whom the rewards of an intellectual challenge in other areas of the curriculum are severely limited.

The importance of the role of the teacher

At a case-study school, one of the observed pupils in Year 9 said of the observed day that the home economics, science and geography lessons had all been easy because the teachers '*answer you really easily for you to understand them properly*'. She had particularly enjoyed the science lesson '*because of the way* [the teacher] *explained it, how she got people to act it out*'. According to the observation notes, the lesson had begun with a dramatic depiction of the blood circulatory system by four pupils, followed by a class discussion. The rest of the double lesson was spent in further discussion and written work on the functions of the heart, using diagrams and text from the blackboard, textbooks and a three-dimensional model of the heart muscles in action. The researcher noted that the observed pupil referred to here asked two questions during the lesson, and the teacher gave her a full explanation on each occasion. Scientific concepts are often intrinsically complex. According to the pupil interviews, judicious choice from a range of alternative teaching strategies can transform such complexity into an appealing object of exploration.

The terse or tentative nature of individual pupils' use of language eloquently communicated experiences of the curriculum that did not surface in direct response to formal inquiry. It emerged that a considerable number of them appeared to accept a sense of pressure unquestioningly even though they found it uncomfortable. The boy who had allegedly been '*constantly writing*' in a drama lesson and protested '*I don't think that was fair*' appeared to be in a minority. Many pupils introduced accounts of work set in particular lessons with the expression '*you had to*', '*you only had to*'. Thus, one girl explained that in technology '*you had to use the drill*', which she had found the hardest task during the observed day. When they were given a choice of tasks or the possibility of extending their work, or there was an expected minimum beyond which they could choose, pupils often used '*just*' or '*only*'. This seemed to signal very directly their alertness to what was and was not compulsory, and to where they had some control over what they could manage through the opportunity to choose. The girl referred to above, for example, had found home economics the easiest lesson during the observed day – '*we were just learning about fruits*' – because she knew about this already; the presence and absence of effort are concisely expressed in her choice of words.

A striking number of pupils were reluctant to admit that they were finding some aspects of their work unmanageable. Expressions such as '*a wee bit hard*' or '*a wee bit too much*' recurred throughout the data. Given that, especially in Years 7 and 8, they might be slightly intimidated by an interviewer, these tentative phrases could be interpreted as cautious acknowledgement of particular difficulties. Such a view might gain support from the fact that while many pupils initially claimed that the amount or level of their work was '*just about right*', they often qualified this view when they were asked more closely about the demands of individual subjects.

Could this initial reluctance to admit to difficulties derive from an atmosphere that does not encourage questions? Do pupils feel that they are expected both by teachers and by parents to be able to find a way of managing their work, even if this is discordant with their own sense of what is acceptable? Pupils in this study frequently perceived the level of difficulty in relation to the workload. The following section will consider their perceptions of the amount of work both in class and for homework.

6.5.2 Amount of work

Both quantitative and qualitative data sought to illuminate pupils' experience of the manageability of the workload. With regard to the questionnaire, two further pairs of antonyms in Item 2 focused pupils' attention on the amount of work they were expected to cover or complete within a given amount of time, both at school and for homework. These are discussed in turn below. The first to be considered was '*I feel overworked in class ... I feel underworked in class*'. Table 6.3 presents, for each year in turn, the overall mean scores for each subject in Year 10 rank order, together with mean scores disaggregated by type of school.

Table 6.3   Pupils' perceptions of the manageability of the workload (in class) by type of school and year group
1 = overworked; 5 = underworked
(i.e. the lower the mean, the greater the perceived workload in class)

	Year 8			Year 9			Year 10		
Subject	Overall mean	Sec. mean	Gram. mean	Overall mean	Sec. mean	Gram. mean	Overall mean	Sec. mean	Gram. mean
French	2.8	2.9	2.8	2.8	2.8	2.8	2.7	2.7	2.5
Maths	2.8	2.8	2.8	2.8	2.8	2.7	2.8	2.8	2.8
Science	3.0	3.0	2.9	3.0	3.0	2.9	2.9	3.0	2.9
History	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.0	2.9
Geography	2.9	2.9	2.9	2.9	3.0	2.9	2.9	2.9	2.9
English	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8
Irish	2.9	2.9	2.8	2.8	3.0	2.6	2.9	2.9	2.9
RE	3.0	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0
Home economics	3.0	3.0	3.0	3.0	3.0	2.9	3.0	3.0	2.9
Art	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1
Technology	3.2	3.2	3.2	3.1	3.2	3.1	3.2	3.2	3.2
PE	3.3	3.3	3.2	3.2	3.3	3.2	3.2	3.2	3.2
Health education	3.2	3.2	3.2	3.2	3.1	3.4	3.2	3.2	3.3
IT	3.4	3.4	3.4	3.3	3.3	3.2	3.3	3.3	3.3
Music	3.2	3.3	3.1	3.2	3.3	3.1	3.3	3.3	3.2
Careers education	–	–	–	–	–	–	3.4	3.3	3.3
Overall mean	*3.0*	*3.1*	*3.0*	*3.0*	*3.1*	*3.0*	*3.0*	*3.1*	*3.0*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

- The results for all three years tended to be clustered more closely round the middle scores than for the level of difficulty, and the overall range was narrower.

- The overall results for Year 8 suggested that, by the end of the year, when the questionnaire was administered, pupils in general felt slightly underworked. As with the level of difficulty, however, perceptions of 'underwork' were more forcefully expressed than those for overwork, and the interrelationship between both types of manageability was highlighted by the fact that the most onerous subjects were also the most difficult (maths and French), and the least onerous were also the easiest.

- Although in Year 9 the results showed very little change from Year 8, analysis of the interviews suggested that just over half the pupils in Year 9 felt overworked, both in class and for homework, as opposed to approximately a third in Year 8. The fact that the questionnaire was administered at the end of the year may account for the discrepancy between the questionnaire and

interview findings. As mentioned earlier, many pupils were reluctant to admitting to unmanageability in the interviews until asked specifically about individual subjects, and the questionnaire responses may conceal this diffidence.

- In Year 10, most pupils appeared to feel the amount of work expected of them was just about right in most subjects, although they felt slightly overworked in maths and French and more overworked in French than they did in Year 9. Arguably, subjects ranked after French and maths could be depicted as content-heavy (science, history and geography), and/or involved a relatively high proportion of the timetable (English) and/or a considerable amount of writing. The nature of the task, or of specific topics, may be an influential factor in this respect.

- When disaggregated by type of school, the Year 10 results continued the trend discernible in the results for Year 8 and Year 9, in that grammar school pupils consistently perceived the curriculum as more onerous than their secondary school peers. Responses from secondary school pupils in Year 10 suggested they felt slightly overworked in five subjects (French, maths, English, geography and Irish); those from grammar schools indicated this was also the case with a further three subjects (science, history and home economics). Grammar school pupils in Year 10 found the French curriculum distinctly more burdensome than in Year 9.

The following table (Table 6.4) presents the overall mean scores for each subject disaggregated by attainment grouping for all three year groups, according to the rank order for Year 10.

Although the overall means for each group suggested satisfaction with the workload as a whole, individual subject scores modified this initial impression. However, the load seemed to be lighter for low attainers in Years 8 and 9 than for the other two groups.

- Taking subjects with scores below 3.0 as indicating relative degrees of perceived overwork, in Year 8, high-attaining pupils felt most overworked (seven subjects), followed by the middle group (six subjects) and then the lower group (four subjects).

- In Year 9, all three groups registered an increase in the workload, particularly the higher and lower attainers. The higher attainers, as in Year 8, had the heaviest workload. All three groups agreed that the workload for French and maths was heavier than in Year 8. The higher and middle groups found the workload in maths heavier than the lower group.

- In Year 10, perhaps the most significant finding here related to the slightly lower numbers of subjects perceived to involve an unmanageable workload. Rather than continue the upward trend conspicuous in Year 9, both mid- and high-attaining pupils identified fewer subjects in this category than in Year 9. One possible explanation for this result might be that, as they matured, these pupils had adjusted to the heavier workload expected of them. Alternatively, they, and especially high attainers, believed they were not getting enough work, either because their aspirations had risen with the approach of the Key Stage 3 tests, or because they spent more time in class on revision for the tests, and, hence, did not feel they had done enough 'new' work. During the interviews, Year 10 pupils of all abilities frequently said

Table 6.4   Pupils' perceptions of the manageability of the workload (in class) by level of attainment and year group

1 = overworked; 5 = underworked
(i.e. the lower the mean, the greater the perceived workload in class)

Subject	Year 8				Year 9				Year 10			
	Overall mean	Low group	Mid group	High group	Overall mean	Low group	Mid group	High group	Overall mean	Low group	Mid group	High group
French	2.8	2.9	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.7	2.7	2.6
Maths	2.8	2.9	2.8	2.8	2.8	2.8	2.7	2.7	2.8	2.8	2.8	2.8
English	2.9	2.9	2.9	2.9	2.9	2.8	2.9	2.9	2.9	2.8	2.9	2.8
Science	3.0	3.0	3.0	2.9	3.0	3.0	3.0	2.9	2.9	3.0	2.9	2.9
History	2.9	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.0	2.9
Geography	2.9	3.0	2.9	2.9	2.9	3.0	2.9	2.9	2.9	3.0	2.9	2.9
Irish	2.9	2.9	2.9	2.9	2.8	2.9	2.9	2.7	2.9	2.7	2.9	2.9
Home economics	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.9	3.0	2.9	3.0	3.0
RE	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.9	3.0	2.9	3.0	3.0
Art	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.2	3.1	3.1
PE	3.3	3.3	3.3	3.2	3.2	3.3	3.2	3.2	3.2	3.3	3.2	3.1
Technology	3.2	3.2	3.2	3.2	3.1	3.2	3.1	3.1	3.2	3.2	3.2	3.2
Health education	3.2	3.2	3.2	3.2	3.2	3.1	3.2	3.4	3.2	3.1	3.2	3.3
IT	3.4	3.3	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3
Music	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3
Careers education	–	–	–	–	–	–	–	–	3.4	3.3	3.3	3.5
Overall mean	*3.1*	*3.1*	*3.1*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

they were bored because they were not given enough to do in particular subjects. One boy in a bottom band said that the level of difficulty in all his subjects was 'just right', but that he would like 'more things to do'. This boy, whose problems of disaffection were familiar to the school, clearly felt frustrated: *'Some people can't keep up, so you have to sit and wait until they have finished, and by that time the class is over. ... It's boring, you are just sitting waiting, and you can't talk to anyone.'* The identification of learning with learning something 'new' recurred throughout the interviews, and the impact of the Key Stage 3 tests in reducing the amount of 'new' learning gains credence from the frequency of pupils' comments on its absence during the second round of Year 10 interviews.

The following discussion will demonstrate the way the questionnaire findings are further corroborated by the interview data.

During the interviews, pupils were asked first whether they thought the total amount of work and learning they had been set during the previous term had been *'too much, not enough or just about right'*. They were then asked whether they managed to finish their work on time, both in lessons and for homework.

'Too much' work

In Year 7, pupils sometimes confused questions on the total amount of work with the issue of breadth and balance. They appeared very conscious of the fact that so much of the first half of the year's timetable had been occupied with preparation for the Transfer Test that there had been little time for anything other than maths, science and English. According to the interviewees, a substantial majority felt they were given far too much to do in both maths and science. One girl said they had *'ignored'* geography and history, and a fellow pupil commented that subjects *'should be about level with the time spent on them'*. Year 8 teachers testified to considerable unevenness and variation in pupils' curriculum coverage in Year 7, and this may have affected respective perceptions of the workload in Year 8.

In the first round of interviews in December, many pupils in Year 8 tended to focus on the workload they encountered in their new surroundings. This related to the overall amount of work and to the workload for particular subjects. As the questionnaire results suggest, by the end of the academic year this sense of an unmanageable workload in relation to most subjects in Year 8 had generally subsided.

Geography, history and maths were perceived most frequently to involve an unmanageable workload in Year 8 – a finding that corresponds with the anxiety expressed by teachers of these subjects in all five schools. With regard to maths, even teachers of high-attaining pupils felt the curriculum was overloaded. While not imposing the pressure pupils experienced in preparation for the Transfer Test – *'they are not under as much pressure as they were there'* – it was reported that pupils *'would know they couldn't afford not to keep at it, they can't slack'*.

Perceptions of overwork in Year 9 were noticeably more frequent than in Year 8. This perception was reflected by a boy in Year 8 who said that his friends had told him that it *'gets much harder'* in Year 9 and was also borne out by the comments of several post-primary teachers, who asserted that they deliberately avoided overwhelming pupils with a demanding workload during Year 8. Maths, as in the previous year, was seen by Year 9 pupils to involve a particularly heavy workload;

English was also included, but while geography, a relatively 'easy' subject according to the questionnaire responses, continued to be irksome, most pupils appeared to be satisfied with history. Pupils' enthusiasm expressed in the interviews for the Irish history studied in Year 9 might possibly account for this finding.

In Year 10, the number of pupils who felt they were overworked remained about the same as in Year 9. Geography remained one of the most onerous subjects, followed by English and modern languages, the latter being seen to impose an unreasonable amount of work in one school in particular.

Many pupils commented on the way preparation for the Key Stage 3 Tests impinged on their workload in other subjects, perceiving revision and practice tests to reduce opportunities to learn anything 'new'. The questionnaire results display a comparative deceleration in the momentum of the general workload from Year 9 to Year 10 and, according to the interviews, pupils believed the tests to be at least partly responsible for this trend. Attitudes to the tests seemed to vary between schools and between individuals. Thus, within the same school some pupils seemed to have felt under pressure, while others had not. One girl implied that they should have started preparing for the tests earlier in the year: '*It was a lot of pressure ... because you probably should have been building up before this term.*' However, another pupil volunteered that they had spent all their lessons revising and doing practice tests in the weeks leading up to the test itself and had done hardly any '*new*' work at all.

Too much of the same task

Writing

When subjects were associated with feeling '*overloaded*', all year groups most frequently related this impression to doing '*too much writing*'. Some pupils found the physical task of writing itself '*hard*', and this coloured their perceptions of lessons where any kind of writing, even copying, occurred. For these pupils, dictation, copying from a roll-over blackboard display or note-taking from oral instruction were particularly daunting. One Year 9 boy depicted science lessons as a marathon: '*The teacher just keeps talking and you have to keep writing and writing, and by the end of the lesson you have done like five pages of writing.*' A number of Year 10 pupils in one school found RE particularly arduous because of the amount of writing it involved. Elsewhere, unreasonable amounts of writing were alleged in history, where too much time was perceived to be spent taking notes and copying them out.

Teachers frequently noted the unpopularity of large quantities of written work with pupils from Year 7 throughout Key Stage 3. For many pupils, and perhaps for some teachers, '*work*' appeared to be identified with '*written work*'. A music teacher observed that '... *sometimes they perceive practical work to not really be like work*'. Teachers of PE, drama, practical subjects, careers education and, in Year 8, modern languages ascribed enthusiasm for their subjects, at least in part, to the relatively small amount of writing they involved.

'Learning by heart'

References to learning a series of related items by heart highlighted the interrelationship between the two types of manageability. Modern languages was frequently cited as '*hard*' in relation to the unavoidable chore of learning lists of vocabulary. The requirement to learn large quantities of '*facts*' could also be 'hard': a Year 9 girl noted there were '*lots and lots of dates to remember*' in history. A significant number of pupils in Years 9 and 10 found the periodic table

in chemistry particularly challenging. The effort of rote learning *per se* was defined as '*hard*' by many pupils.

'Not enough' work

Pupils across all year groups agreed that being '*underworked*' was as undesirable as being '*overworked*'. A significant minority of pupils expressed dissatisfaction when they perceived they had too little to do. In the case of Year 7, this perception related particularly to the summer term when all the creative and outdoor activities were seen to be concentrated in order to compensate for pruning these areas during the months before the Transfer Test. One girl worried that she was out of practice in basic skills for maths and English, skills essential for her imminent transfer to post-primary school.

When fresh tasks had not been provided for those who finished activities ahead of the rest, or when a task was insufficiently challenging to engage attention, pupils frequently denounced a subject as '*boring*'. According to the interviews, this situation could arise in almost any subject, which suggests that either pupil-related variables such as academic ability or individual aptitude, or mediation-related variables, such as differentiation, the nature of the task or the approach of the teacher, may play a more significant role in sustaining engagement than the intrinsic nature of the subject itself. As one girl observed: '*Maybe if you like the subject, like, I like maths, maybe I would think I get too little.*'

Perceptions of the amount of work over the whole Key Stage suggested that pupils felt that it was least manageable in Year 9. This perception is corroborated by the findings relating to amounts of homework. Perceptions of this aspect of the curriculum will be considered next.

6.5.3 Amount of homework

The final pair of antonyms concerning manageability in Item 2 was '*too little homework ... too much homework*'. The following tables present, for each year in turn, the overall mean scores for each subject in Year 10 rank order, together with mean scores disaggregated by type of school.

- It can be seen that in all three year groups, pupils wanted appreciably less homework in French, maths and English, though not in science. Thus, they wanted less homework in three of the four curriculum areas with the highest allocation of teaching time.

- For all three year groups, the overall mean score suggests more satisfaction than may in reality be the case. Such an interpretation may partly be attributed to the relatively high scores assigned to music, technology, careers education, IT and, notably, PE. Moreover, with respect to Year 10, the new 'subject', careers education, can be seen to weight the '*too little*' end of the scale for this year group in the same way here as for '*amount of work in class*' and conceptual difficulty.

- In Year 9, responses for maths, French, science and history were expressed in slightly more negative terms than in Year 8; and while Year 10 pupils perceived they had an unacceptable amount of homework in seven of their subjects, Year 9 pupils believed this to be the case in eight. It may be possible that Year 9 pupils' perceptions of homework may reflect the impact of higher levels of expectation once they embarked on the second year of the Key Stage.

Table 6.5   Pupils' perceptions of the manageability of the workload (homework) by type of school and year group

1 = too little homework; 5 = too much homework

(i.e. the lower the mean, the lesser the amount of homework)

	Year 8			Year 9			Year 10		
Subject	Overall mean	Sec. mean	Gram. mean	Overall mean	Sec. mean	Gram. mean	Overall mean	Sec. mean	Gram. mean
French	3.3	3.2	3.5	3.4	3.4	3.5	3.5	3.3	3.7
Maths	3.4	3.3	3.6	3.6	3.5	3.7	3.4	3.4	3.6
English	3.2	3.2	3.3	3.4	3.3	3.5	3.4	3.3	3.6
History	3.1	3.0	3.3	3.2	3.1	3.3	3.2	3.1	3.3
Geography	3.1	3.1	3.2	3.2	3.1	3.3	3.2	3.1	3.3
Irish	3.2	3.1	3.2	3.2	3.0	3.5	3.2	3.1	3.3
RE	3.0	2.8	3.2	3.1	3.1	3.2	3.1	3.1	3.2
Home economics	3.0	3.0	3.2	3.1	3.0	3.2	3.0	2.9	3.2
Science	2.9	2.8	3.0	3.0	2.9	3.1	3.0	2.9	3.1
Art	2.8	2.7	2.9	2.9	2.7	3.2	3.0	2.8	3.3
Technology	2.6	2.6	2.6	2.7	2.6	2.9	2.6	2.6	2.8
Music	2.5	2.4	2.7	2.7	2.6	2.8	2.6	2.6	2.6
Careers education	–	–	–	–	–	–	2.4	2.4	2.4
IT	2.2	2.2	2.0	2.3	2.3	2.4	2.4	2.3	2.5
Health education	2.4	2.3	2.6	2.5	2.6	2.5	2.4	2.2	2.5
PE	1.8	1.8	1.7	2.0	1.9	2.1	2.1	2.1	2.1
Overall mean	*2.8*	*2.8*	*2.9*	*2.9*	*2.9*	*3.1*	*2.9*	*2.8*	*3.0*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

- In replacing maths as the subject with the most unacceptable amount of homework, the manageability rating for the amount of homework in French in Year 10 reflects the ranking for the other two measures of manageability. However, it is worth noting that, apart from French, the Year 10 responses do not indicate any increase in dissatisfaction with the amount of homework. In fact, the rating for maths in Year 10, though still relatively high, is lower than that for Year 9.

- With regard to type of school, the responses again express a greater degree of dissatisfaction in grammar schools, especially in Year 9. As shown in Table 6.6, the difference between grammar and secondary schools in numbers of subjects with '*too much*' homework over the three years is quite striking.

Table 6.6   Number of subjects with too much homework

	Secondary	Grammar
Year 8	3	8
Year 9	6	10
Year 10	7	10

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

The considerable gap between grammar and secondary schools in Year 8 starts to close at the end of Year 9, and this trend appears to continue in Year 10. In Year 9, while pupils in both types of school registered a significant increase in amounts of homework, grammar school pupils' responses were the more extreme in maths, English, Irish, geography and history.

Table 6.7 Pupils' perceptions of the manageability of the workload (homework) by level of attainment and year group

1 = too little homework; 5 = too much homework
(i.e. the lower the mean, the lesser the amount of homework)

Subject	Year 8				Year 9				Year 10			
	Overall mean	Low group	Mid group	High group	Overall mean	Low group	Mid group	High group	Overall mean	Low group	Mid group	High group
French	3.3	3.2	3.3	3.5	3.4	3.3	3.5	3.5	3.5	3.3	3.4	3.7
Maths	3.4	3.3	3.4	3.5	3.6	3.5	3.5	3.7	3.4	3.4	3.5	3.5
English	3.2	3.2	3.2	3.3	3.4	3.4	3.3	3.5	3.4	3.3	3.3	3.5
Irish	3.2	3.1	3.2	3.1	3.2	3.0	3.3	3.3	3.2	3.1	3.2	3.3
Geography	3.1	3.1	3.2	3.2	3.2	3.1	3.2	3.3	3.2	3.1	3.1	3.2
History	3.1	3.0	3.1	3.2	3.2	3.1	3.2	3.3	3.2	3.1	3.1	3.2
RE	3.0	3.0	3.0	3.1	3.1	3.2	3.1	3.2	3.1	3.1	3.1	3.1
Home economics	3.0	3.0	3.0	3.1	3.1	3.0	3.0	3.2	3.0	3.0	3.0	3.1
Art	2.8	2.7	2.8	2.9	2.9	2.7	2.8	3.1	3.0	2.8	2.9	3.2
Science	2.9	2.8	2.8	3.0	3.0	2.9	3.0	3.0	3.0	2.9	3.0	3.0
Music	2.5	2.5	2.5	2.6	2.7	2.6	2.6	2.8	2.6	2.6	2.6	2.6
Technology	2.6	2.6	2.6	2.6	2.7	2.6	2.6	2.8	2.6	2.6	2.6	2.7
Careers education	–	–	–	–	–	–	–	–	2.4	2.5	2.4	2.4
IT	2.2	2.2	2.1	2.1	2.3	2.3	2.2	2.4	2.4	2.4	2.3	2.5
Health education	2.4	2.3	2.3	2.6	2.5	2.6	2.6	2.5	2.4	2.3	2.2	2.5
PE	1.8	1.8	1.7	1.8	2.0	2.0	1.8	2.0	2.1	2.1	2.0	2.2
Overall mean	2.8	2.8	2.8	2.9	2.9	2.9	2.9	3.0	2.9	2.9	2.9	3.0

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

Table 6.7 presents the overall mean scores for each subject disaggregated by attainment grouping for all three year groups, according to the rank order for Year 10. As with the preceding tables, the overall means here disguise dissatisfaction relating to the academic subjects, particularly in the case of the higher group.

- In Year 8, the low attainers registered scores above 3.0 ('*too much homework*') in five subjects, the middle group in six and the high attainers in eight. Moreover, expressions of dissatisfaction were more forceful in the higher group, giving higher scores than the other two groups in French, maths, English and history.

- In Year 9, each group added one more subject to those in which they believed they were set too much homework. Thus, high attainers identified too much homework in nine out of a total of 15 subjects. Maths was deemed to be the worst culprit according to all three attainment groups, though most onerous for the higher group.

- While exceeding the figure for either of the other two groups, the number of subjects perceived by high attainers in Year 10 to have an unacceptable amount of homework remained the same as for Year 9. It is possible that high attainers in academically oriented schools might be more rigorously prepared, in terms of revisions and practice tests, for the Key Stage 3 tests, than their peers elsewhere. Bearing in mind earlier comments from high-attaining Year 10 pupils relating to the perceived absence of '*new*' learning in the weeks preceding the tests, the impact of the tests might perhaps account in part for these results.

According to Hartley (1999), little research on homework has been done in the UK. In a review of the findings from available research in the US and the UK, he reports an unmistakable correlation between the amount of time spent on homework and academic attainment. According to one UK study of effective secondary schools (Rutter *et al.*, 1979): '... *schools which set homework frequently ... tended to have better outcomes than schools which made little use of homework.*' It seems that the dissatisfaction expressed by grammar school pupils in the data here with what they perceive to be unacceptable amounts of homework may highlight the overriding pre-eminence of academic achievement in this type of school. It is worth pointing out, however, that in the two UK studies Hartley refers to '... *additional factors, such as verbal ability, social class, prior achievement and parental monitoring*' also played an important role.

Homework as a measure of the total workload

During the interviews, pupils were asked whether they managed to finish their homework on time. The earlier section on 'the curriculum as planned' noted the tendency of pupils and teachers to judge the acceptability of the workload as a whole in a particular subject by the acceptability of the amount of homework. Asked which subject involved the most work, a girl in Year 9 identified maths, because of the amount of homework. Another pupil said she was '*underworked*' in music, because they were not given homework in these subjects. It can be seen that these perceptions reflect the findings for maths and music recorded from the questionnaire.

Sixteen post-primary teachers used homework as a measure of manageability when they were asked about the workload. A science teacher reflected that she had not had to '*weigh them down with too much homework*', which made her think ' ...

the course is manageable'. If pupils were completing their homework on time, and if they did not feel pressurised by the curriculum to set more than their own estimation of a reasonable amount, many teachers seemed to regard homework as a reliable indicator of the manageability of the workload.

For many pupils, homework was a burden. However, there were some who welcomed it as an opportunity for uninterrupted concentration, which either the rapid pace of the lesson or a noisy classroom had not provided. One girl, for example, said she had not properly understood the reading she had been asked to do in an English lesson but that the meaning was clear to her once she had sat down with it at home.

It seems significant that in this study, while homework for a whole class could thus be related to an overloaded curriculum, at an individual level, it could also be a sign that certain pupils were struggling. This interpretation was summarised by a maths teacher who said she preferred not to give much homework if her Year 8 pupils were making satisfactory progress in class: *'They would only be doing homework as backup.'* Numerous instances of an inappropriate pace were identified by pupils during the interviews, taking home work intended to be completed in class, for example, because it was *'hard to get done in the time'.*

'Finishing it off for homework'

Pupils frequently asserted that homework in a range of subjects consisted of finishing off any work not completed in class. As one boy said of maths, this often meant that ' ... *if you were behind, you'd have to finish it for homework'*, a practice which was perceived as extra pressure by both slow workers and low attainers, who frequently pointed out that unfinished classwork often had to be fitted in either on top of the set homework, or in addition to the regular homework for that night set in other subjects. Moreover, while this policy was designed to inspire motivation, for those who disliked homework, it created a powerful incentive to complete their work as fast, rather than as thoroughly, as possible.

Being given so much to do in class that it interfered with time allocated for homework in other subjects was a cause for resentment from pupils in all year groups. Hartley (1999) reproduces the homework policy in operation in a real school as a possible model for others to follow. The policy suggests six different kinds of tasks deemed by the school as appropriate for homework. Although finishing work started in class is included, there is a note of warning which seems particularly pertinent in view of the apparent frequency of this kind of homework according to evidence from the pupil interviews: '... *homework to finish off work started in class. This option must be used with care as the time required will vary greatly from pupil to pupil. Such homework should be kept to a minimum.'*

Not all children can rely on a calm and private space at home where they will be left to complete their homework undisturbed. Their views on the need for a reassuring and purposeful atmosphere in class were highlighted in relation to mediation. The recurring perception, from both teachers and pupils, of homework as a highly significant component of the total workload underlines the importance of allowing time in class, and, by implication, according to teachers of some subjects, space within the curriculum, both for adequate explanation and for checking pupils' understanding of a concept or process, when they are expected to continue working on it on their own outside school.

As in the case of both the level of difficulty and the amount of work in class, the findings for the amount of homework reveal that the highest level of dissatisfaction occurs in Year 9; this apparent surge of disaffection will be explored in more detail in Chapter 7.

The preceding discussion has explored aspects of manageability which impinge on pupils' learning experience in the classroom. The following section will attempt to elucidate the way the learning experience is assimilated into the unique conceptual framework of the individual learner.

6.6 The curriculum as internalised

In order to pursue the study's most elusive target, the internalised curriculum, this section will further examine the interview data to investigate ways in which the relative manageability of the learning experience were seen to enhance or undermine its conceptualisation by the learner.

6.6.1 Mediating the level of difficulty: the nature of the task

Learning 'new stuff' is hard

The definition of learning as *'learning something new'* was very common across all schools and year groups. Pupils of all abilities agreed that new learning requires a slower pace. New knowledge is harder to *'take in'* than material which extends or relates to knowledge which has already been accommodated within an individual's conceptual range. Whatever the level of academic proficiency, when little pre-exists within pupils' internalised conceptual framework for them to use as an interpretative tool, most pupils, according to the data here, need time to fully apprehend a new concept before they can reach out and appropriate it. The crucial experience of intellectual appropriation or *'taking it in'* was captured in phrases that depicted it in physical terms. One very high-attaining girl who said she had not been *'quite sure'* about learning to tell the time at first, in French, asserted that ' *... French was all right. Once you got the idea of it, it was easy.'* Another pupil said of a novel they were asked to read in class, it was hard *'to take the story in'* because everyone on her table was talking. She had read it later at home and then she had felt *'able to take it in'*. A boy elsewhere clearly recognised that he had intellectually appropriated new learning in technology (about how levers work) because he felt confident that he could explain it to somebody else:

> *At the start it was quite hard, because it was hard to understand. It would have been quite hard to explain if I had had to explain that, that was quite hard. But when you sort of understood it, it got quite easy, when you knew what you were talking about.*

From the view that anything totally *'new'* is harder to learn, it follows that a completely new subject will be hard *per se*. Given that intellectual content was experienced as '*hard*', though not necessarily unenjoyable, new subjects involving considerable amounts of it would seem high in potential for perceived difficulty. From its consistently high ranking for difficulty in the tables here, the implications for modern languages, in terms of pace and differentiation, seem inescapable.

'Projects'

A number of practitioners across all schools expressed reservations about open-ended tasks, especially for Year 8, and the difficulty many, though not all, pupils

encountered in projects spread over several weeks. They perceived this to relate to pupils' immaturity, in respect of time management, in their need for the security of a specific and pre-determined structure, and in their inability to grasp and explore a concept's potential implications.

Certain pupils indicated that they appreciated the potential of this kind of work. One high-attaining girl in Year 8 expressed frustration at the slowness of pace in her mixed-ability class and had enjoyed working on her own because '*you can get on and do how much you know you want or you can*'. More pragmatically, however, a boy in the same class, had found history easy during the observed day because '*you just jot down stuff ... you just copy from the book*'. He also said he had found project work in English '*easy ... because you just write down stuff*'. Pertinently, his English teacher reflected that although pupils had enjoyed the project concerned, which involved doing their own research in the school library, it had been largely unproductive in terms of the quality of the work.

From this study it seems that pupils associate writing with '*real*' or '*hard*' work. The perception from the boy quoted above would seem to justify his teacher's view that project work can lead to pupils' reproducing information rather than analysing or evaluating it. Given the proliferation of reference materials through the rapid development of IT, and the beguiling variety of resources available to schools, it seems that vigilance may be required if pupils are encouraged to carry out their own research.

'*Speaking and Listening': their potential for enhancing understanding*

Listening is 'boring'

Observation of a drama lesson revealed that even in this relatively popular subject, pupils may experience boredom and inactivity. Individuals were giving oral presentations in turn on a prepared topic. This was intended to develop their skills as listeners as well as speakers, as the teacher's reprimand to some inattentive pupils underlined: '*Boys, please! Your listening skills aren't very good.*' The researcher's notes were punctuated with comments such as: '*... pupils whisper ...* [teacher] *tells class about sitting back and not fidgeting ... group look bored, and some yawn ...*'. At only one point did the researcher record that '*the group all listen quite intently*' to one of their peers. Offering pupils an opportunity to address the whole class confronts teachers with a challenge in terms of sustaining the listeners' engagement; factors such as peer credibility, or popularity, come into play, in addition to highly conspicuous variation in individual oral skills. The fact that at the end of each presentation, the teacher asked the class as a whole for a predetermined feedback – '*Content was okay, wasn't it group?*' – might have reinforced their adoption of the role of listeners as a passive one.

In terms of making sense of the learning experience, listening is a fundamental cross-curricular skill. According to the pupil interviews, many learners here regarded listening as a passive, and intrinsically 'boring', activity. This attitude may be unwittingly reinforced by teachers who regard pupils as passive recipients of 'chunks' of information, thereby denying them opportunities to concentrate through different approaches to 'active' listening. The dramatised portrayal of blood circulation in the science lesson referred to earlier appeared to be an exception. According to the observations, many pupils spend much of their time in the classroom as listeners to a pedagogic style of discourse that becomes increasingly familiar during their school career. For the pragmatically inclined, listening skills and powers of concentration may become selective and utilitarian, tuning in to the utterances which demand a response in order to survive in the

academic system, so that any discourse which does not answer this description becomes, by definition, less of a priority. In order for all pupils to become discerning, critical 'active' listeners, and, perhaps, particularly for those less accustomed to opportunities for sustained oral exchange at home, listening, and being listened to, in a range of contexts, might need more explicit promotion across the curriculum.

Oral activities

A substantial majority of pupils found oral tasks relatively easy, often by virtue of the fact they were '*not writing*'. However, there were a few in all year groups, such as the Year 9 boy who found '*orals in English*' hard, who recognised the intellectual effort required for articulating their own understanding. In some cases, too, a sense of difficulty was derived from a lack of confidence and consequent anxiety about self-expression in front of the rest of the class.

Oral tasks were widely acknowledged to be enjoyable by most pupils. As such, they were valued by teachers, who recognised the learning opportunities inherent in assimilating and organising conceptual material in order to articulate it as coherent speech. An RE teacher referred to Year 9 pupils' enthusiasm for engaging in abstract '*philosophical*' discussion. An English teacher described an allegedly very successful discussion with Year 10 pupils of a novel that raised '... *that question of "Are people born evil?"*' She said they appreciated the opportunity '*to talk about ... a very adult issue*' and also the fact that the teacher respected their opinion. Modern languages teachers agreed that oral tasks certainly helped to render the learning of vocabulary and grammar more palatable. Significantly, a teacher of Irish noted that pupils' enthusiasm waned towards the end of Year 8, as the attainment targets demanded a gradual shift towards specified quantities of written work.

For low attainers, oral discussion was seen as particularly valuable. A maths teacher commented on parents' support for the additional written homework that resulted from her deliberate emphasis on oral work in lessons with '*weaker classes*'. She had instigated this approach as a means of ensuring her pupils had an adequate opportunity to reach a thorough understanding of mathematical concepts – '*to reinforce*' them.

Those teachers who analysed the effectiveness of oral activities in enhancing pupils' understanding referred to the way in which 'speaking' requires learners to organise and articulate ideas, while 'listening' offers them an opportunity to evaluate and refine their own versions of a concept in relation to alternatives offered by others.

An English teacher, asked why pupils do not see 'talking' as relevant, explained:

> *Some of them would still perceive that anything they are doing that's worthwhile has to be 'hard work' ... they love talking. They would think copying out of a book for a library project as work, even though they may not have worked at assimilating the information in a way which extends their understanding* (English teacher).

From the pupils' point of view, reading and writing are consciously taught and learned, and therefore consciously remembered as, and identified with, learning. Talking is something most of them learn unconsciously in the course of everyday life, while they may be ostensibly occupied with something else. As the majority

of young children quickly discover, talking is enjoyable, engaging and often rewarding, whereas the physical and intellectual processes involved in reading and writing require conscious and strenuous exertion.

Many teachers believed that pupils do not take practical and oral activities as seriously as writing. The fact that it is written work which has most status in terms of academic achievement – a status recognised and reinforced by external assessment, and therefore, of necessity, by teachers – communicates an unavoidable association between writing and serious work. The general agreement that pupils in Years 8, 9 and 10 find alternative activities to writing enjoyable highlights the cumulative effect on motivation of a steadily increasing number of writing tasks over Key Stage 3.

6.6.2 Absence affects manageability

Following their investigation into children's views on school improvements, Maden and Rudduck (1997) reported that '... *pupils want more help with the problems they have catching up when they have missed work – whether for an odd day or longer periods, and whether through illness or choice*'. A number of pupils in the cohort study referred to difficulties encountered as a result of missing lessons for various reasons. Absence could affect the degree of difficulty pupils experience in '*taking things in*', through missing the teacher's introduction of a new topic, explanation of a particular concept or demonstration of a new skill. One girl in Year 7 attributed her dislike of science to the fact that she often missed parts of lessons to attend music and drama activities: '*You don't understand, because you've had to rush and the teacher hasn't had time to discuss it with you.*' A Year 8 science teacher affirmed that because of the priority of '*getting through it* [the specified workload] *in enough time ... and appropriately thoroughly*', the class had to move on '*fairly quickly*'. Thus, '*any sort of absence at all*' exerted considerable pressure on pupils to '*catch up ... with everyone else*'.

Missing out an essential element of the learning experience disrupts continuity, adds to the amount to be learned later, accelerates the pace, and therefore raises the level of difficulty. This puts pressure on pupils and, as in the case of the girl above, undermines any potential enjoyment in the subject. The experience of learning is cumulative; even for high attainers, the process of internalising the curriculum rapidly becomes unmanageable if developing understanding is dispelled through interruption.

6.6.3 Coherence through continuity over Key Stage 3 as a whole

There were pupils in all year groups who noted that a sense of continuity made something easier to learn (see Chapter 4). A girl in Year 9 said she had found the concept of '*forces*' in science '*easier because it was something we already knew*'; a Year 10 pupil identified '*some parts of history, things that we have learnt before*' as easy. Many pupils found the reappearance of certain content or skills reassuring; if, however, the use of familiar material was perceived to stop short at repetition, if it was not incremental, it was widely dismissed as '*too easy*' and therefore '*boring*'. Thus, while coherence in relation to manageability was more frequently acknowledged as helpful than not, its implications for enjoyment evoked a more equivocal response.

Learning is a cumulative process and over the Key Stage most pupils increase in maturity. Whether they consciously registered any change or not, the number of perceptions of difficulty appeared to level off in Year 10, in spite of the fact that in one or two subjects difficulty was perceived to have increased, and in spite of the perceived decelerating effect of the Key Stage 3 tests. This may suggest that, by the end of the Key Stage, the sum of their learning and the process of maturation, together with acclimatisation and recognised competence in cross-curricular skills, may contribute to reducing perceptions of difficulty among the majority of pupils.

6.7 Conclusion

According to many pupils, across the full range of ability, the sense of achievement acquired through mastering a recognised challenge played a crucial role in securing their engagement with their learning. Teachers agreed that a task's inherent complexity was not necessarily a deterrent. Many of them regarded it as a professional responsibility to mediate complexity in such a way that it became appealing and accessible.

Quantity *per se*, however, was perceived to be a more intractable problem. Both pupils and teachers averred that, in some subjects, the pressure of an overloaded curriculum precluded opportunities for making the prescribed content or skills more interesting and enjoyable. According to the interviews, the pupils' most important concerns were:

♦ the detrimental effect on understanding of an inappropriately rapid pace;

♦ the amount of stress generated by a workload, in class or at home, which was '*hard to get done in the time*', together with the importance of '*getting things finished*'; and

♦ the boredom and frustration of lessons where they found the work too easy or they were given too little to do.

Many of them expressed satisfaction when they felt their needs in these respects were being met. However, it was clear from their comments that, when they believed such priorities were neglected, they could not enjoy their work. Engagement became at best perfunctory and at worst an option to be dismissed.

6.7.1 Manageability: its relation to enjoyment and engagement

A challenge is enjoyable

Pupils' responses made it clear that in some subjects they felt they had too much to do, and that in others the pace was too fast or the content too difficult. Nevertheless, a significant number of them, across all abilities, communicated an unmistakable message: firstly, a challenge is vital to sustaining engagement; and secondly, a sense of achievement, of '*getting it finished*', reinforces both commitment and confidence.

This message was articulated most forcefully by high attainers, many of whom expressed considerable frustration at the perceived lack of stimulating opportunities for intellectual adventure within the curriculum. One boy in Year 10 admitted: '*Just this year, I haven't really felt challenged by anything.*' A girl elsewhere

complained that, in geography and RE, the lessons '*go really slow and it makes you lose interest*'. Although a boy in one school seemed satisfied that high-attaining pupils there were catered for – '*If you finished an exercise earlier than everyone else, then* [teacher] *will come to you and explain about the next one*' – a pupil in another school referred to the constraints of working in a mixed-ability class: '*I would like to go on, but I can't – everybody has to do the same thing all at one time.*'

Many teachers agreed that pupils enjoy a challenge, and there were specialists in most subjects apart from modern languages who intimated their concern that, at times, the level of the work was not stretching all their pupils. Several teachers also made the point that self-esteem was an important priority. The ideal task must be '*challenging enough, but also attainable*' and, crucially, differentiated so that it could be interpreted across the whole range of individual achievement.

Practical/expressive activities are enjoyable

The majority of pupils found PE and IT, art, drama, music and, often in the case of boys, technology relatively easy subjects, which were also seen as undemanding in terms of the workload. All these areas of the curriculum appealed to a very large majority by virtue of their practical nature, the relatively negligible amounts of writing they involved, and the more relaxing atmosphere that prevailed during lessons. As one Year 9 boy said: '*Sitting writing is boring. It takes too long to go through.*'

However, a mere absence of written work *per se* did not automatically imply enjoyment. In these subjects, as in others, '*too easy*' was condemned as '*boring*'. The observed drama lesson described above bears testimony to the sense of futility generated by practical lessons where pupils were not fully involved in the task in hand.

6.7.2 Curriculum perspectives: differences between schools

Although common themes recurred throughout the data from all schools, it is possible to discern shifts of emphasis between types of schools and, with respect to the case study schools, between individual schools, according to individual priorities. Thus, for schools that embraced the full range of ability, differentiation was a major concern. Where pupils were set according to academic ability, differentiation took place at the planning level for school managers and heads of department; where mixed-ability teaching continued, as in at least one instance, throughout Key Stage 3, differentiation was additionally an urgent concern at the level of mediation.

It was in schools where high attainers were in a substantial majority that the most children reported being expected to learn at an uncomfortably rapid pace. Although in these schools the workload was also frequently perceived to be more demanding than elsewhere, at the same time, it was in these schools that some pupils most clearly articulated the absence of any intellectual challenge in their learning.

In these schools, there was a discernible tendency to value academic subjects above the creative arts. Although the latter were often popular with pupils, they tended to dismiss the potential of arts subjects to offer any worthwhile challenges, and to regard time spent on arts subjects as less worthwhile than that spent working

towards academic achievement. By contrast, pupils in schools with a population more evenly balanced, or weighted towards lower attainers, seemed correspondingly more enthusiastic, and more likely to value the potential of the arts for personal achievement.

The socio-economic context of the pupil population was an important variable. In schools situated in areas where many families experienced high levels of socio-economic deprivation, unemployment, instability in the home and parental attitudes towards school added a further dimension to manageability. According to the interviews, pupils appreciated the value of a calm and purposeful atmosphere for learning. Moreover, they found it hard to catch up on work missed through absence. In these schools, both collective and individual self-esteem may be more vulnerable than elsewhere; consequently classroom management, and attendance, become more pressing priorities. Pupils of all abilities in such schools in this study saw themselves as capable as those elsewhere of learning, through challenges 'pitched' at the appropriate level. However, given the proportion of low attainers and socially disadvantaged children within the respective pupil population, it seems that schools in socio-economically disadvantaged areas might particularly benefit from a more sympathetic degree of flexibility across the whole curriculum, in order to achieve the level of manageability conducive to effective learning.

6.7.3 Manageability and coherence: change over time

The way in which pupils internalise the curriculum was something which, by their own admission, had never occurred to a number of teachers. Equipped within their subjects, it was, as one interviewee observed, '*very difficult seeing their point of view*'. When asked to reflect on the volume of work pupils were expected to cover in Year 9, an English teacher said he '*did not stop to think*' about the amount of work pupils might be expected to absorb in other subjects at the same time as his own. He acknowledged that for them ' ... *the pressure may be a cumulative one*'. He added that any workload had to be seen in the context of the '*three-year span*'. Accordingly, as a teacher, he could '*expand things a little bit in one direction and reduce them in another*' in the knowledge that he could return to them again as appropriate later on. A French teacher made the same point: if he felt the pupils were not ready for something prescribed, he left it out, knowing he would return to it at some later stage. If pupils have no access to such an overview of the Key Stage 3 curriculum, they cannot appreciate the intrinsically recursive nature of their learning, or its cumulative value. Given that many pupils acknowledged the value of continuity in relation to manageability, the absence of such a longitudinal perspective may deprive them of an overarching sense of continuity and progression that might enhance their current learning.

Pupils' access to longitudinal coherence may be limited in Year 8, and to respectively lesser extents in Years 9 and 10, by their own level of maturity in the way that they perceive time. As demonstrated in Chapter 4, time beyond a fairly immediate future may be difficult to apprehend, and they may find it hard to be realistic about long-term goals.

There is some indication in the data here that pupils' apprehension of the Key Stage 3 curriculum changes from year to year. Thus the more frequent perceptions of unmanageability at the beginning of Year 8 and the more extreme and more frequent perceptions of unmanageability during Year 9 contrast with the more qualified views expressed at the end of Year 8 and again during Year 10. One explanation for such a disparity might be that, especially in Year 8, most pupils

eventually acclimatise to what is expected of them. In Year 10, however, it might also be possible to attribute it to developing maturity. Changes in perceptions may also reflect objective shifts in the curriculum and assessment experiences presented to pupils in each of the three years.

Whatever the cause, acclimatisation or maturation do not have to imply resignation. The evidence for diminishing enjoyment during pupils' progress through the Key Stage (described in the next chapter) suggests that, for many of them, without meticulous attention to differentiation, at the level of curriculum design as well as at the levels of planning and mediation, and without the sensitive and imaginative deployment of a range of alternative pedagogic strategies, the curriculum as a whole may become an experience to endure rather than an engaging programme of challenges and broadening opportunities.

7. ENJOYMENT

7.1 Background

Pupils' enjoyment of the curriculum has been a frequently researched theme in previous studies relating to pupils' experiences and perspectives of the curriculum. A review by Lord and Harland (2000) revealed that, after appropriateness and relevance, enjoyment has been the most frequently occurring topic of research on pupils' perspectives on the curriculum. In particular, research on enjoyment of certain subjects (especially science, maths and technology) has been a common area of investigation, with results frequently analysed by gender and age. A number of studies have asked pupils to rank their subjects in order of enjoyment, for example in the PACE project (Pollard *et al.*, 1994; Pollard, 1996), Blatchford (1996) and Hendley *et al.* (1996).

As the chapter will reveal, this present study corroborates many of the findings that these earlier research reports have outlined. Thus, once again and very unsurprisingly, the high-ranking popularity of PE and art will be shown to emerge in this study, just as it has in other research. Likewise, the finding by Blatchford (1996) that pupils tend to base their criteria for enjoyment on a sense of '*fun*', interest and their perceived ability in a subject partly resurfaces in this study's interview data. Existing research literature also notes that team and group work are generally viewed positively by pupils (Angier and Povey, 1999; Lyle, 1999), as are active and practical learning approaches, notably in science (Parkinson *et al.*, 1998; Stark and Gray, 1999). This chapter also highlights these types of curriculum experiences as central to pupil enjoyment, but, in addition, gives equal analytical attention to what pupils and teachers say is not enjoyed. Finally, other research in all areas of the curriculum (at primary and post-primary levels) has highlighted the classroom environment created by the teacher as a particularly important factor in pupils' enjoyment of school and of specific lessons. In general, research suggests that pupils like teachers who explain clearly, who listen, who are fair and who are interesting and take an interest in the pupils (Pollard, 1996; Younger and Warrington, 1999; Garner 1993). These qualities too came through the pupil data used for the present chapter, although qualitative analysis highlights as well how sophisticated young people can be in evaluating pedagogical performance.

This chapter thus will confirm many of the previously identified 'ingredients' underpinning pupils' enjoyment of the curriculum. However, it has addressed enjoyment in three different ways. In Part 1, the focus is upon any overlap or differences between teachers and pupils about the very concept of enjoyment as a curriculum characteristic, as well as relaying individual subjects' popularity and how that changes over time. In Part 2, the chapter looks more generally at how pupils felt involved and engaged in their learning, and Part 3 reports on how engagement can affect observed classroom behaviour. Differences between high- and low-attaining pupils and also those who registered different engagement levels are given particular attention.

PART 1: PUPIL ENJOYMENT

7.2 Introduction

In this section, the issue of how far, and in what ways, teachers and pupils construed enjoyment of the curriculum as a component of their learning experiences is explored. It utilises both qualitative and quantitative data, and covers all the five curriculum levels.

7.3 Curriculum as specified

Very rarely did pupils refer to the curriculum as specified. However, on two occasions, pupils noted an overlap in science and geography (see Chapter 3), and clearly found it not enjoyable:

I think geography relates too much to science and basically it's repeating what I have just been doing in science. ... It's like giving myself double the work (male, Year 10).

We told the science teacher that we have done all this [astronomy] *in geography, but she's, like, still going on and on about it ... so I think that only one subject should have astronomy in it* (female, Year 8).

Some teachers did refer to issues relating to the Key Stage 3 curriculum as specified when discussing the concept of pupil enjoyment, and a range of viewpoints emerged. Within that range, two distinctive stances were apparent: those teachers who indicated that, for them, enjoyment at the level of specified curriculum was a non-issue, and those who did perceive that the NIC had had some negative influence on pupil enjoyment.

For those teachers citing a non-issue at this level, reasons included:

- curriculum specifications were irrelevant, as teacher mediation determined pupil enjoyment;

- curriculum specifications cannot ensure enjoyment – some elements of learning were necessary, but not necessarily enjoyable; and

- curriculum specifications at Key Stage 3 were conducive to enjoyment, but Key Stage 4 was more problematic.

ENJOYMENT AND THE CURRICULUM AS SPECIFIED IS A NON-ISSUE BECAUSE:	
Curriculum specifications are irrelevant	*I think the material is relatively irrelevant. I think it's very much down to the person who's doing it* (science teacher).
	It's not the content, and it's not how it fits into everything else, it's how the teacher coordinates it and brings it to life for everybody. That's really what's the crux of it (technology teacher).
Curriculum specifications cannot always include enjoyment	*I really don't think it's CCEA's problem. I just think there are some topics that don't lend themselves to being taught in an exciting way. It's all very well making it interesting and enjoyable all the time, but you have still got to teach them maths at the end of the day* (maths teacher).
Key Stage 3 curriculum specifications are acceptable	*So probably the more practical end of things they enjoy. But it's really good I think ... Key Stage. There's not that much that has to be written or that they have to research: that's a big bone of contention at GCSE though* (art teacher, secondary).

However, a greater number of teachers did raise concerns about the negative effect of the Key Stage 3 curriculum on pupil enjoyment. The responses included:

* curriculum specifications were too full to allow for pupil enjoyment;

* curriculum specifications had 'lost' aspects of learning previously enjoyed – in terms of content or topics and also opportunities for practical approaches;

* curriculum specifications were implicated in the loss of fun and increased pressure – on both pupils and teachers; and

* curriculum specifications had removed teacher judgement, choice and flexibility that facilitates pupil enjoyment.

ENJOYMENT AND THE CURRICULUM AS SPECIFIED IS AN ISSUE BECAUSE:	
Curriculum specifications are too full	*I think there is an awful lot of work in Year 9. You really need to economise with your time on each topic. Some of the pupils would like to spend more time on things that are of interest to them, for example, the plantations – they enjoyed doing that. But, everything you do, you have to really economise with your time, because there's such a big area to cover* (history teacher).
	I hate to say it, but enjoyment is being lost because of the sheer amount of it (Year 7 teacher).
Curriculum specifications have lost aspects of enjoyment	*You know, for instance, children at primary school level are not allowed to tackle the Normans now, and yet down on the Ards peninsula, it's a hotbed for Norman settlement and development and there are lots of primary schools down that way. That is just one example of where, you know, this compartmentalisation of subjects and content destroy this, perhaps, enjoyment, whereas children could just – before the curriculum became prescribed from the point of view of history – I used to take my children down to the Ards peninsula ...* (Year 7 teacher).

Curriculum specifications have increased pressure	*I think schools have taken a lot of the fun away from children. I don't think that kids seem able to enjoy themselves the way they used to. I keep asking myself why. There is a lot of pressure on kids to succeed and I wonder if we are caught up in that – I know we are – I don't know if we can avoid being caught up in it. I wonder if the Northern Ireland Curriculum as designated by the 1989 order has a big part to play in it. Our teachers will not let pupils out to go to certain events in the school, because they've got assessments to get done. I wonder where the fault in education is* (principal, secondary). *Sometimes, you feel that they don't have time to sit back and enjoy ... and we certainly don't have time to sit back and enjoy teaching them; it is always this driving them* (French teacher).
Curriculum specifications have removed teacher choice and flexibility	*The other thing about the prescribed curriculum is you don't have any room for yourself ... because I was interested* [in x], *they were interested, you know. People often had a few little topics they liked doing and you could* [bring them up to that] (Year 7 teacher).

It was noteworthy that none of the nine references to the issue of the curriculum being too full were from grammar schools and no Year 10 teacher made this comment. Thirteen teachers noted the omission of topics previously enjoyed by pupils. The sense of constraint upon teachers to omit aspects of learning which, from their previous experience, they felt had been enjoyed by pupils was apparent in these instances. It was teachers of arts and English who perceived the Key Stage 3 curriculum to allow for pupil enjoyment: in these instances, the practical emphasis within the orders was noted. Three secondary and one Year 7 teacher relayed the view that curriculum specification was irrelevant to pupils' learning.

As an overview, the most common concerns appeared to relate to the scale of learning expected from pupils and how the imperatives associated with that learning (particularly assessment) adversely affected teacher and pupil enjoyment.

7.4   Curriculum as planned

A small number of teachers remarked on this level of curriculum, noting some adaptation or inclusion of the topics and activities taught to take account of pupil enjoyment. These adaptations included: references to changing or removing aspects that didn't work or weren't enjoyed; continuing to include topics or approaches (e.g. project work) that previous pupils enjoyed; and '*stretching or extending*' on topics which were popular.

No Year 7 teachers appeared to express views on considering enjoyment as a feature of curriculum planning, and again the references came particularly from staff in secondary schools.

ENJOYMENT IS CONSIDERED IN THE CURRICULUM AS PLANNED BECAUSE:	
Non-enjoyed content is changed	*... well it might have worked for us but it hasn't worked for the pupils, and you get a very strong feedback* [whether] *they have enjoyed it. If they haven't enjoyed it, it has been a struggle and they haven't got out of it what we expect they would, then we change it totally* (art teacher).
Enjoyed content is continued	*... we try to build* [enjoyment] *in where we can. We do a very, very small project, we might give them two weeks to do it, and they love doing that. They love doing researching. A lot of them have the internet at home and access to the internet in the library and the library books. They love researching things like that. So wherever possible, we try to build it in* (geography teacher).
Enjoyed content is extended	*... if you find a topic that you particularly enjoy teaching or that you think the pupils enjoy doing, you can sort of spend a bit more time on that* (French teacher).

7.5 Curriculum as mediated

Teacher interviewees most often associated enjoyment in the curriculum with teacher mediation: the teacher's personality, performance and choice of specific pedagogical tasks appeared to be the key factors underpinning pupil enjoyment. On teacher personality, some remarks pinpointed the importance of teachers conveying their own enjoyment and enthusiasm for a subject (*'being fired up'*), while other references were to the importance of good relationships with pupils and classroom ambience (*'caring'*, *relaxed'*) which were established by the teacher. Teacher performance included references to skill in teaching, for example, to calibrating the pace and amount of work proffered and ensuring differentiation (see Chapter 6). A number of interviewees (such as modern languages teachers) also noted how important it was to ensure pupils enjoyed a subject when first being introduced to it.

ENJOYMENT IN THE CURRICULUM AS MEDIATED OCCURS BECAUSE OF:	
Teacher personality	
Enthusiasm	*I've always believed that if you're fired up by it, you will fire other people up by it as well* (science teacher).
Good relationships	*I mean they may get on with the teacher* [or] *may not get on with the teacher, and that can just transform their experience. I think if you are enjoying your subject and you have a good relationship with your teacher, you probably will do well in it, if you have ability at all. So, I think there's a great connection there* (vice-principal).
Ambience	*In many respects, I think, if you enjoy the environment in which you learn something, you enjoy the person who is teaching it to you; and you enjoy the people around you who are learning with you, you'd probably do it an awful lot better than if you're just getting it slung at you in a very inert sort of way – by ... sort of, an individual who couldn't care less and who's there just to, like, 'perform' the role of a teacher delivering a subject* (science teacher).

Teacher performance	
Differentiation	*You couldn't give the child a high level if they can't do it, because they don't enjoy it, and they will turn round and say they are not enjoying it. They will stand and chat or they will do nothing, because they are not getting anything out of it. You do it to their own standard really, what they are capable of* (PE teacher).
Positive introduction	*Well, what I hope I have taught them is an enjoyment of what they are doing and I would like to think that they have a positive feeling about their ability to learn the language for a start. I think that's the most important thing when you start teaching children languages* (French teacher).

Once again, secondary teachers more often mentioned teacher mediation in relation to pupil enjoyment. Some 168 references were recorded from secondary teachers, compared to 48 among the grammar school sample. It was notable that ten secondary teachers indicated that teacher personality and performance were key factors in enjoyment compared with just two grammar school respondents. Equally, twice as many Year 8 teachers referred to teacher mediation of enjoyment as those in Year 9 and Year 10 (some 41 compared to 27 and 26 respectively). This finding, of course, correlates with the view that pupil enjoyment was a crucial component when starting to learn new subjects.

When discussing enjoyment of school and particular lessons or subjects, the teacher – and the way they mediated learning – featured particularly highly in the young people's accounts. Equally, teachers and pedagogy were cited as a major cause of lack of enjoyment. Factors contributing to lack of enjoyment covered teachers' presentation style (often couched as 'boring' or 'talking too much') and their behaviours and personality (being 'cross ... grumpy', 'too strict', 'in a bad mood'). Most common, however, was a viewpoint that encompassed actual pedagogy: evaluative comment on the way teachers 'explained' things surfaced as the most common phrase when describing lack of enjoyment relating to teachers. Thus, references to 'not explaining ... well', '... clearly' or '... enough', '...just telling you "Right, do this"' were much in evidence in the youngsters' discourse, suggesting they were quite sophisticated and critical 'consumers' of teaching performance. Other aspects of teacher mediation noted as a source of non-enjoyment were examples of teachers being unjust, and, quite notably, a dislike of being deprived of learning opportunities. Teacher absence requiring temporary cover, teachers working on administration tasks during lessons and student teachers were all offered as explanations as to why certain lessons were not enjoyed. Knowledge of more work being achieved by other classes was also an issue for a few pupils.

It was noteworthy that grammar school pupils made more mention of teachers being boring and 'explaining' inadequately in Year 8, while, at that time, their secondary counterparts more often cited teachers' personality ('shouting too much', 'being crabby') as a source of non-enjoyment in teacher mediation. By Year 9, more secondary school pupils were noting general teacher presentation as 'boring' and 'talking too much' as well as 'not explaining' adequately. In contrast, this general 'boring' and 'talking too much' discourse appeared to largely drop from the grammar school sub-sample, although critiques of pedagogy ('explaining') were still in evidence. Pedagogical explanations for non-enjoyment, thus, became more precise and refined, and by Year 10, although the numbers of remarks relating

to teachers and non-enjoyment fell, a number of issues were raised. Most notably, pupils with low engagement and attainment made a much starker renunciation of lessons where the teacher was not liked:

If you don't like the teacher, you are not going to like the subject because you are not going to listen (male, low attainer, Year 10).

I don't do much work 'cos I don't like the teacher (male, low-engaged, Year 10).

Other high-attaining pupils could judge pedagogical style with considerably more subtlety but no less criticality:

You would be writing things down and copying off the overhead. ... She would be very good at giving you handouts, but whenever she comes to explaining it, she tells you to copy it down and then she starts talking over and you can't listen to her as well. ... So, you end up having to read over it at home at night-time to try and figure out what she was talking about (female, high attainer, Year 10).

She doesn't really be open. She just states the facts, but she does it in a very long way. ... She will get her folder out and say 'Right, x is this, this and this' and then she will widen it and say more about it, more than we need. So, it's unrelevant (female, high attainer, Year 10).

Sometimes, the issue of non-differentiated support was clearly pinpointed:

I don't think the teacher puts much effort into trying to help. He moves too fast and is too strict. I just haven't learnt anything this year; it's gone completely over my head (male, Year 10).

Because some of them don't really teach you. They don't wait for you, or nothing, they just work at their own speed. They don't work at your speed and are going on ahead and you are not learning anything. ... They don't listen to you if you say you don't understand (female, Year 10).

In contrast, teacher qualities which pupils appreciated included providing help; being '*helpful*'; taking time to explain; and making it easy to understand – all suggesting some sense of investment in the individual learner. Even more common was the view that teachers who were '*fun*', '*funny*' '*giving you a laugh*' were liked, and learning with them was more enjoyed. One child summarised this as: '*He teaches you work, but makes it entertaining at the same time.*' Praise also counted as a feature of enjoyable mediation.

'*A relaxed atmosphere*' was also noted as a source of enjoyment in curriculum mediation, and, as one child noted, '*... if the teacher makes you relax, you learn more*'. Thus, opportunities for peer conversation, teachers not being too strict or shouting were all factors contributing to this relaxed ambience. Year 9 and Year 10 pupils also noted enjoyment of learning could be increased by knowing the teacher better or '*... the teacher knowing us better*'.

7.6 Curriculum as experienced

7.6.1 Pupil enjoyment and survey results

In the questionnaire, the pupil sample was asked to rate how much they '*really enjoyed*' each of their subjects on the five-point semantic differential scale (Item 2). Table 7.1 shows the overall results for each year (ranked by the scores in Year 10).

Table 7.1 **Pupils' perceptions of enjoyment by each subject by gender and year group**
1 = I really enjoy it; 5 = I really dislike it
(i.e. the lower the mean, the greater pupils' enjoyment)

Subject	Year 8			Year 9			Year 10		
	Overall mean	Boy	Girl	Overall mean	Boy	Girl	Overall mean	Boy	Girl
PE	1.6	1.6	1.7	1.8	1.6	2.0	1.8	1.6	2.0
IT	1.8	1.8	1.9	2.0	1.9	2.0	2.0	1.9	2.1
Art	2.1	2.2	2.0	2.3	2.3	2.2	2.5	2.7	2.4
Technology	2.3	2.1	2.4	2.4	2.1	2.7	2.5	2.2	2.8
Health education	2.4	2.3	2.5	2.7	2.9	2.5	2.5	3.0	2.0
Geography	2.7	2.6	2.8	2.7	2.6	2.7	2.6	2.5	2.6
Careers education	–	–	–	–	–	–	2.6	2.8	2.5
Science	2.3	2.3	2.4	2.6	2.5	2.7	2.7	2.6	2.8
History	2.6	2.7	2.5	2.7	2.7	2.7	2.7	2.7	2.7
Irish	2.8	2.9	2.6	2.7	2.7	2.6	2.8	2.8	2.8
Home economics	2.4	2.8	2.2	2.7	3.1	2.5	2.9	3.3	2.6
English	2.6	2.8	2.4	2.7	2.8	2.6	2.9	3.0	2.7
Maths	2.8	2.8	2.7	2.9	2.8	3.0	2.9	2.9	2.9
Music	2.6	2.9	2.4	2.8	3.0	2.6	3.1	3.3	2.9
French	2.7	2.9	2.5	3.0	3.2	2.8	3.1	3.4	2.8
RE	3.0	3.1	2.9	3.0	3.1	2.9	3.1	3.3	3.0
Overall mean	*2.5*	*2.5*	*2.4*	*2.6*	*2.6*	*2.6*	*2.7*	*2.8*	*2.6*

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

The subjects that were least popular by the end of Key Stage 3 were RE, French and music, followed by maths, English and home economics. PE and IT stand out as particularly popular, with other non-academic subjects, art, technology and health education, also rated highly.

Virtually all subjects showed a decline in enjoyment over the three years, and those with the most marked fall-off (by 0.4 or more) included music, home economics, French, science and art. RE remained the least enjoyed subject throughout the Key Stage. Table 7.1 also shows that even the high-rated popular subjects – PE, IT, technology and especially art – showed some decline by the end of Year 10. The enjoyment ratings of Irish, maths and the humanities (geography and history) remained fairly stable, with geography even showing a very slight increase in popularity in Year 10.

Gender and enjoyment

Notwithstanding these overall figures, analysis by the usual variables showed some noteworthy variations. Overall gender variations showed that girls gave higher enjoyment ratings to more of their subjects than boys did. By Year 10,

noteworthy differences of opinion were evident in French, music, art, English, plus especially home economics and health education. However, there were exceptions, particularly PE and technology, as well as IT, geography and science, where, in each year, boys' ratings of subject enjoyment exceeded those of the girls. Nevertheless, despite an overall view of girls' higher enthusiasm, their decline in enjoyment was often steeper than that of the boys and this seemed especially the case in Year 9. By the end of this year, PE, technology, science, French, home economics and maths (all dropping by 0.3 in mean value) stood out as subjects that the female sub-sample were notably less enthusiastic about than was the case in Year 8. Hence, some 'hidden' disengagement may be evident from these results. Boys' steepest decline in enjoyment in Year 9 was in health education, home economics and French. Art and music showed a similar degree of fall-off, but this was in Year 10 with both gender sub-samples registering an equivalent drop in enjoyment.

Thus, some fairly predictable gender differences remained in pupil views of the NIC at the end of Key Stage 3. Boys liked PE, IT, technology and science notably more than girls by Year 10. Girls, in contrast, markedly favoured French, art, music, home economics and English. It may be that policy makers need to consider these findings and plan to overcome such stereotypical responses.

Schools' free school meal eligibility and pupil enjoyment

Free school meal (FSM) differences showed overwhelmingly that those pupils in schools within the 'low' category gave lower ratings of enjoyment than their peers in 'high' FSM category schools to almost all subjects and throughout the three years. The only exceptions were when pupils in the low FSM schools gave a very slightly higher rating to PE in Year 9, IT in Year 10 and art in Years 9 and 10 than their counterparts in high FSM schools. Thus, the conclusion emerges that the 'core' and other 'traditional' subjects were invariably more enjoyed by pupils in schools serving poorer socio-economic communities. Notwithstanding this, a consistent trend within the three sub-samples was for pupils from high free school meal schools to show much sharper decline in enjoyment throughout the Key Stage, with many subjects registering 0.4 or more fall-off (most markedly English). In contrast, with the exception of science and French, the results for low FSM schools showed less fall-off and more consistent ratings across the Key Stage. Indeed, by Year 10, pupils in the schools in the low FSM category recorded increased enjoyment of maths, Irish and geography. Thus, it would seem that disengagement could be a more deeply felt experience for pupils in high FSM schools, particularly in the key areas of IT, numeracy and literacy.

Social class and pupil enjoyment

Social class analysis confirmed some of the above findings, particularly the marked decline in enjoyment of English, maths and science by the working-class sub-sample. Whereas Year 8 saw them giving higher enjoyment ratings than middle-class peers, by the end of the Key Stage, this trend was reversed. Music, RE and Irish showed the same pattern of decline in enjoyment by working-class pupils compared to middle-class peers. Health education remained the only subject more popular with the working-class sub-sample than their middle-class peers by the end of the Key Stage.

Table 7.2   Pupils' perceptions of enjoyment by type of school and year group

1 = I really enjoy it; 5 = I really dislike it
(i.e. the lower the mean, the greater pupils' enjoyment)

Subject	Year 8			Year 9			Year 10		
	Overall mean	Secondary	Grammar	Overall	Secondary	Grammar	Overall	Secondary	Grammar
PE	1.6	1.6	1.6	1.8	1.8	1.7	1.8	1.8	1.8
IT	1.8	1.8	1.8	2.0	1.9	2.1	2.0	2.0	2.0
Art	2.1	2.1	2.1	2.3	2.3	2.2	2.5	2.5	2.5
Technology	2.3	2.2	2.4	2.4	2.3	2.6	2.5	2.5	2.6
Health education	2.4	2.5	2.1	2.7	2.6	2.7	2.5	2.4	2.6
Geography	2.7	2.6	2.8	2.7	2.6	2.9	2.6	2.5	2.7
Careers education	–	–	–	–	–	–	2.6	2.6	2.8
Science	2.3	2.3	2.4	2.6	2.6	2.6	2.7	2.6	2.8
History	2.6	2.5	2.7	2.7	2.6	2.8	2.7	2.7	2.7
Irish	2.8	2.9	2.6	2.7	2.5	2.8	2.8	2.8	2.9
Home economics	2.4	2.4	2.6	2.7	2.6	2.9	2.9	2.8	3.0
English	2.6	2.5	2.8	2.7	2.6	2.8	2.9	2.8	2.9
Maths	2.8	2.6	3.0	2.9	2.8	3.1	2.9	2.9	3.0
Music	2.6	2.5	2.9	2.8	2.6	3.1	3.1	3.0	3.2
French	2.7	2.6	2.9	3.0	2.9	3.1	3.1	3.0	3.3
RE	3.0	2.9	3.1	3.0	3.0	3.0	3.1	3.1	3.1
Overall mean	2.5	2.4	2.5	2.6	2.5	2.7	2.7	2.6	2.7

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

Table 7.3 Pupils' perceptions of enjoyment by level of engagement and year group

1 = I really enjoy it; 5 = I really dislike it
(i.e. the lower the mean, the greater pupils' enjoyment)

Subject	Year 8				Year 9				Year 10			
	Overall mean	Low group	Mid group	High group	Overall mean	Low group	Mid group	High group	Overall mean	Low group	Mid group	High group
PE	1.6	1.7	1.6	1.6	1.8	1.9	1.7	1.8	1.8	2.0	1.8	1.8
IT	1.8	2.0	1.8	1.7	2.0	2.2	2.0	1.8	2.0	2.1	2.0	1.9
Art	2.1	2.2	2.1	2.0	2.3	2.4	2.3	2.1	2.5	2.7	2.5	2.4
Technology	2.3	2.4	2.2	2.2	2.4	2.6	2.4	2.3	2.5	2.6	2.5	2.4
Health education	2.4	2.6	2.3	2.4	2.7	2.8	2.7	2.5	2.5	2.6	2.7	2.3
Geography	2.7	3.0	2.7	2.5	2.7	3.0	2.7	2.4	2.6	2.9	2.5	2.3
Careers education	–	–	–	–	–	–	–	–	2.6	2.9	2.8	2.3
Science	2.3	2.5	2.3	2.2	2.6	3.0	2.6	2.3	2.7	3.1	2.7	2.3
History	2.6	2.9	2.6	2.4	2.7	3.0	2.8	2.3	2.7	3.0	2.6	2.4
Irish	2.8	2.9	2.8	2.6	2.7	2.9	2.7	2.3	2.8	3.0	2.7	2.7
Home economics	2.4	2.6	2.5	2.3	2.7	3.0	2.8	2.5	2.9	3.1	2.9	2.6
English	2.6	2.9	2.6	2.3	2.7	3.1	2.8	2.3	2.9	3.2	2.9	2.5
Maths	2.8	3.0	2.8	2.6	2.9	3.3	2.9	2.6	2.9	3.3	2.9	2.6
Music	2.6	3.0	2.6	2.3	2.8	3.1	2.8	2.5	3.1	3.3	3.1	2.8
French	2.7	3.0	2.6	2.4	3.0	3.5	3.0	2.6	3.1	3.6	3.1	2.6
RE	3.0	3.2	3.0	2.8	3.0	3.4	3.1	2.7	3.1	3.3	3.1	2.9
Overall mean	2.5	2.7	2.4	2.3	2.6	2.9	2.6	2.3	2.7	2.9	2.7	2.4

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

Table 7.4   Pupils' perceptions of enjoyment by level of attainment and year group

1 = I really enjoy it; 5 = I really dislike it
(i.e. the lower the mean, the greater pupils' enjoyment)

Subject	Year 8				Year 9				Year 10			
	Overall mean	Low group	Mid group	High group	Overall mean	Low group	Mid group	High group	Overall mean	Low group	Mid group	High group
PE	1.6	1.7	1.7	1.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9
IT	1.8	1.9	1.8	1.8	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0
Art	2.1	2.0	2.1	2.2	2.3	2.2	2.3	2.3	2.5	2.5	2.5	2.4
Technology	2.3	2.1	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.6
Health education	2.4	2.4	2.6	2.2	2.7	2.6	2.6	2.8	2.5	2.4	2.2	2.7
Geography	2.7	2.6	2.8	2.7	2.7	2.6	2.6	2.7	2.6	2.5	2.5	2.6
Careers education	–	–	/	–	–	–	–	–	2.6	2.5	2.7	2.8
Science	2.3	2.3	2.3	2.4	2.6	2.6	2.6	2.6	2.7	2.6	2.7	2.7
History	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Irish	2.8	2.9	2.9	2.6	2.7	2.4	2.8	2.7	2.8	2.5	2.9	2.9
Home economics	2.4	2.3	2.4	2.6	2.7	2.6	2.7	3.0	2.9	2.7	2.8	3.0
English	2.6	2.4	2.6	2.8	2.7	2.6	2.7	2.8	2.9	2.8	2.8	2.9
Maths	2.8	2.6	2.7	2.9	2.9	2.8	2.9	3.0	2.9	3.0	2.9	2.8
Music	2.6	2.5	2.6	2.8	2.8	2.6	2.8	3.0	3.1	3.0	3.1	3.1
French	2.7	2.6	2.7	2.8	3.0	2.9	3.0	3.0	3.1	3.0	3.1	3.2
RE	3.0	2.9	3.0	3.1	3.0	3.0	3.1	3.1	3.1	3.2	3.1	3.1
Overall mean	2.5	2.4	2.5	2.5	2.6	2.5	2.6	2.7	2.7	2.6	2.7	2.7

Source: *NIC Cohort Study: Years 8, 9 and 10 Pupil Surveys*

Type of school and pupil enjoyment

Analysis by the type of school variable (see Table 7.2) almost always showed grammar school pupils rating subjects throughout the three years as less enjoyable – or at least not more so – than their peers in secondary schools. Maths, music, French and English showed particularly marked differences in enjoyment at Year 8 between the two sub-samples. However, not surprisingly perhaps, the gap narrowed by Year 10. Irish and health education, but only in Year 8, were the sole exceptions to this pattern, with grammar schools giving these subjects higher enjoyment ratings. The secondary school sub-sample registered a marked decline in enjoyment of music in Year 10, but Year 9 especially saw this group's notably lower enthusiasm for science, maths and French. Grammar school pupils' enjoyment of art was less evident in Year 10. Geography uniquely increased its popularity in the secondary schools by the end of the Key Stage.

Engagement and pupil enjoyment

When the variable of level of engagement (see Table 7.3) was applied to the data, it was evident – perhaps predictably – that low-engaged pupils rated all subjects less enjoyable than those in the high engagement sub-sample, and this trend was evident in each year of the Key Stage. However, it was noteworthy that some subjects showed considerably less discrepancy in Year 8 than others. In this first year of the Key Stage, PE showed only 0.1 differences in enjoyment, and art and technology only 0.2 between the low-engaged and high-engaged groups. The biggest differences between these two groups in Year 8 came in music (0.7), French and English (0.6), history and geography (0.5), and then maths and RE (0.4). Equally, the decline in enjoyment throughout the Key Stage was starker in some subjects for the low-engaged sub-sample. Science, French and maths all showed considerable falls in rating by Year 10 from these pupils compared to their high-engaged peers. IT and music were the only subjects where high-engaged pupils showed a relatively greater decline in enjoyment. It was also noteworthy that the sharpest decline of enjoyment in a number of subjects was often in Year 9 (with the exception of art, music and health education) and here particularly those in the low-engaged sub-sample showed some marked fall-offs in enthusiasm: French and science and also home economics and maths all fitted this category of early decline. The consistency with which low-engaged pupils signalled their lesser enjoyment of English, maths, science and particularly French is thus highly evident.

Attainment and enjoyment

Looking at the data on attainment and enjoyment rates (see Table 7.4), low-attaining pupils enjoyed ten of the 15 first-year subjects more than their high-attaining peers. Compared to the latter group, Year 8 low-attainers gave markedly higher scores to English, maths, technology, home economics and music – showing a difference of 0.3 or more in mean scores. Only Irish was liked more by high-attainers to a comparable degree. Low attainers, however, showed a greater 'drop-off' of enjoyment throughout the Key Stage in English, maths, art, technology, music and RE. High-attaining pupils registered the highest enjoyment of PE, IT, Irish and health education in Year 8, but no subjects were enjoyed more by this sub-sample than their low-attaining peers in Year 9, and only art, maths and RE were liked more by high attainers than low attainers in Year 10. While high-attaining pupils' levels of enjoyment of most subjects fell from Year 8 to 9, they did not show notable further decline from Years 9 to 10, unlike their low-attaining peers, whose enjoyment scores faded each year. The marked 'loss' or decay of low attainers' enjoyment throughout the Key Stage and the initial lesser enjoyment of subjects by high-attaining pupils are two stark findings from this analysis.

7.6.2 Pupil enjoyment and qualitative results

Pupils' perspectives on activities that were enjoyed

When qualitative data were analysed for accounts of the enjoyment factor in the curriculum as experienced, one particularly frequent descriptor emerged in pupils' versions of the enjoyable curriculum (usually given in response to a question about what they had enjoyed each term): namely *'fun'*. This was a concept often set as a counterpoise to *'work'* as in *'... it feels like good fun, not work'* or *'... it's fun, it's not all like work, work – you are working but the atmosphere is different'* (male, Year 8). Not surprisingly, practical subjects such as art, IT, drama and technology were all rated as enjoyable subjects by this criterion, although there were also examples of pupils citing maths, history and Spanish lessons as *'fun'* because of the teaching approach: *'The maths teacher always gives us challenges to make work fun'* (male, Year 9) or *'Spanish is done easier for you, easier and more fun'* (female, Year 9).

Sometimes, the enjoyment/fun criteria focused on a more distinctive counterpoise to 'work', specifically highlighting the opportunities for practical and creative pursuits, as in *'Art isn't really working. It's just using your hands to create things ... making things'* (male, Year 8), or *'I really like music. It's good fun whenever you get instruments out and you make up a tune'* (female, Year 9). Here again, by inference, such active learning was conceived as something different from 'work'. Indeed, *'practical work'* was cited as the most enjoyable aspect of the curriculum by the vast majority of pupils in each year of Key Stage 3.

'Variety' in learning tasks also surfaced as a source of enjoyment and fun. This rated as the second highest response to what was enjoyable, and was especially prevalent in Year 9.

Interviewer: *What have you enjoyed most in all the things you have done and learnt this term?*

Interviewee: *Definitely the sports we've been doing, because we have had a wider variety of sport this year* (female, Year 10).

Interviewer: *What sort of lessons do you think people in your year find most interesting?*

Interviewee: *English, because everything is more interesting and everybody enjoys it ... we do more things. We don't just take things down and do comprehensions* (female, Year 9).

The idea of cooperative learning, class discussion and oral work also featured in the sample's responses as a counterpoint to 'work', particularly in Years 9 and 10.

I enjoyed doing composition in music, because it wasn't sitting on our own, having to sit and do work or studying or whatever. It was working with a group and putting your point of view, and listening and talking about your point of view and what you wanted to do. So I enjoyed that (male, Year 9).

Class discussions make [the subject] more lively, and if it's just the teacher explaining the whole time, it would be boring. But, when the class get involved, it's better (female, Year 10).

It's not 'Do your work, don't talk, don't even look up, just work, work, work'. You talk more to the next person, say, in French ... instead of writing down, there's more interaction (male, Year 10).

Another feature of the enjoyable curriculum related to experiencing responsibility, autonomy and choice: '... *choosing your own topic*' or '*project*' was cited as a reason for enjoying English and geography in a number of instances. Also, the freedom to work autonomously in art ('... *getting to make your own shapes*'), technology or in science experiments surfaced:

> [The technology teacher] *lets us work away on our own and get it done the way we want it done. ... He doesn't really tell us we're wrong. He just says 'If that's how you want to do it'* (female, Year 10).

> *I have enjoyed science. ... It's just because you do a lot of experiments and stuff and you see what happens ... making something right up. ... The teacher trusts you more with the equipment* (female, Year 9).

The notion of enjoyment was also closely connected to the ambience of the classroom that certain subjects or teachers created. As noted earlier, '*relaxed*' classrooms emerged as a powerful source of enjoyment. Opportunities to talk and to sit with friends were particularly enjoyed.

Finally, a range of responses cited differentiation as a source of enjoyment. References to enjoyment were associated with '... *taking things at your own pace*', '... *booklets for our own level*' or the fact that the teacher generally proffered differentiated learning opportunities: '... *people who found the work hard, he would give them easier work and build them up*' (male, Year 9).

Overall, it was evident that low-engaged pupils' criteria of the enjoyable curriculum did not include differentiation. Instead, their references to enjoyment related to the general '*fun ... a laugh ... not working*'. They were also much more likely to focus on being allowed to talk and to volunteer sport and PE as an enjoyable curriculum experience. Occasionally, low-engaged, but high-attaining, pupils also focused on autonomy.

Interviewer: *Is there anything about X school you really like?*

Interviewee: *There's lots of sport* (male, low-engaged, low attainer, Year 8).

Interviewer: *What did you enjoy most in all the things that you did and learnt last term?*

Interviewee: *I enjoyed drama because it was a lot of fun and got a lot of laughter in it* (female, low-engaged, high attainer, Year 9).

Interviewer: *What have you enjoyed most since Easter?*

Interviewee: *I suppose art; everyone likes art ... we talk away to each other* (male, low-engaged, high attainer, Year 10).

Interviewer: *What have you enjoyed most in all the things you've learnt and done this term?*

Interviewee: *Art and PE. ... Art because you don't have to sit and be quiet and work really, really hard. You can do your own thing at your own time really. ... As long as you get it all done by a certain time, then it shouldn't matter really* (female, low-engaged, high attainer, Year 10).

Interviewer: *Anything about school you've really liked this term?*

Interviewee: *Nothing stands out, just the normal things like PE ... I just like sport all round. I enjoy the way it's taught and it's fun* (male, low-engaged, high attainer, Year 10).

In contrast, more high-engaged pupils were far more likely to focus on the issue of choice within 'work' as a feature of enjoyability, rather than cite something that appeared not to be 'work' at all.

Interviewer: *Anything about your school you've really liked this term?*

Interviewee: *I liked doing the English project on animals ... because you get to work at your own speed and choose your own topic* (female, high-engaged, high attainer, Year 8).

Put together, the qualitative findings may suggest that all pupils, regardless of engagement or attainment levels, expressed particular enjoyment of practical-based subjects. However, the capacity to express pleasure in more academic subjects and in more traditional learning tasks (like writing) was more usually the domain of the high-engaged pupil. Nevertheless, conditions of autonomy and choice – in effect, noting how their individuality as a learner was being respected and reflected – still dominated this sub-sample's discourse.

Pupils' perspectives on activities that were not enjoyed

And what of the activities that were not enjoyed? Pupils from all degrees of engagement shared a discourse, which centred on a dislike of monotony, isolation, passivity and sedentariness in learning. These expressions of non-enjoyment constantly surfaced through terms like *'all'*, *'just'*, *'always'* which were applied to *'sitting'*, *'reading'*, *'listening'* and above all *'writing'*:

... we just sit there reading and writing

... always just sitting

... sitting there writing all day and listening to the teacher

... all we do is write

... always writing, having to write a lot of things down

... all other classes, you are just used to sitting down and writing and listening

... I just sit and listen all the time

... you just sit there the whole time

... just listen to the teacher going on

... it's always just sitting looking at a book, which is boring for everybody

... just sit there, writing

... it's always writing and writing

... when it's all writing, I don't really like it

We are always given things to write, pages and pages to write out from the OHP ... we do that all the time.

Hence, the sense of reduced curriculum enjoyment due to an overwhelming negative experience of passive and non-varied learning modes, as well as physical constraint, was strongly expressed. No doubt, the outcomes of this accounted for the strong sense of resigned tedium and compliance that emerged among the sample. Indeed overall, pupils from all sub-samples acknowledged the lack of enjoyment in the curriculum. The difference, as the quotations below show, was

perhaps the severity and selectiveness of that dislocation from the curriculum as a pleasurable experience. Put starkly, resignation and a capacity to cope with non-enjoyment were evident in the discourse of high-engaged and/or high-attaining pupils.

> *There's no subject where I am completely happy. ... I just think you have to do the work, so there's not much you can do. When you are learning things, it's not to have fun, it's you have to learn them* (female, low-engaged, high attainer, Year 10).

> *I don't really know* [if I've enjoyed anything about school this term]. ... *It's the same old thing, has to be done* (female, mid-engaged, high attainer, Year 10).

> *It's just I hate school. I want to get out of it. I would rather be at the house, doing something and getting a job and earning money instead of being in school all day. I would get a mechanicing job, being a mechanic, because you get paid for it and I like doing it* (male, low-engaged, low attainer, Year 10).

> *No, there is nothing really I've enjoyed this term. Some days, it's just, like, coming to school is like 'I really wish I wasn't here'. There is never a day when I come in and think 'Yeah! I am in school'. So, there's nothing I like about it really* (female, mid-engaged, high attainer, Year 10).

> *I quite enjoyed the social aspects of this term, because we get a fairly generous lunch and it's good. But, whenever it comes to learning, I don't know if it's a thing of enjoyment, unless it is a subject I enjoy. It's sort of, like, you have got to do it really, but it's not as if I am sitting there going 'Oh, I really don't want to do this', and it's not as if I am sitting there going 'Oh, this is great', unless it is a topic I'm quite interested in* (male, high-engaged, high attainer, Year 10).

Teachers on pupil enjoyment

Many teacher responses referred to pupils' enjoyment at the point that they received or interacted with the curriculum. The comments covered when – and indeed also whether – pupils could enjoy their curriculum experiences. Teacher references to when pupils experienced the curriculum as enjoyable focused mainly on either the actual learning task or on the way the teacher related to the young person and their learning. Thus, according to teachers, pupils experienced enjoyment in learning tasks when:

- their ability was catered for;
- they felt a sense of achievement or satisfaction after mastering some aspect of learning;
- they felt their performance had improved;
- the subject was new and they felt they could achieve;
- they were being challenged ;
- they were given freedom to develop ideas; and
- they recognised where the learning task was aiming to get to.

Clearly, in their responses, achievement was a strong component of enjoyment, or, at least, as the last point indicates, the opportunity to appreciate or anticipate the outcomes of mastery of a learning task.

ENJOYMENT IN THE CURRICULUM AS EXPERIENCED OCCURS WHEN:	
Ability is catered for	*I think if they are well enough catered for in terms of their ability, they probably will enjoy it. I think probably it's most stressful for the younger pupil who is trying to do something that they just can't deal with, and I think we do address that* (vice-principal).
A sense of achievement is ensured	*... no matter what the topic, if you can ensure a child is fit to tackle something and achieve in that topic, they will always enjoy it at any level, it doesn't matter ...* (maths teacher).
Improved performance is noted	*I think probably one of the best topics we have done was this term because it was the second topic ... and they performed better; therefore they felt good about it* (maths teacher).
A new subject is on offer	*They really feel an enormous sense of achievement because a lot of them have never done French before and they are starting off something completely new and they don't feel they are failures before they even start* (French teacher).
Pupils are challenged	*It is a lot more enjoyable because they are bigger and because it's a challenge for them* (art teacher).
Freedom to develop ideas is given	*Q: What do you think it is about projects that they like?* *A: I don't know. I suppose they are given a free hand really. We just give them guidelines and from that they can go away and do their own thing. We give them marks for showing initiative and they love doing that* (geography teacher).
Pupils recognise learning outcomes	*When they have had a couple of lessons on the keyboard, they suddenly find they can open the book, they can work it out, they can play a tune, they can use their fingers. It's really enjoyable. The difficult bit of getting to them is suddenly worth it. So I think you have got to work with them, sort of looking towards where they are aiming to get to* (music teacher).

Other references noted the contribution of the teacher in these learning tasks. Accordingly, teachers thought that pupils experienced enjoyment of the curriculum when:

- they received praise for being successful;

- they were given encouragement as they learnt; and

- they were taught an enjoyment of what they were doing, and that '*learning is fun*'.

It was notable that all references to the teacher's contribution to pupils' enjoyment of their experienced curriculum in terms of praise and encouragement came from secondary teachers. However, the notion of 'teaching enjoyment' was noted by grammar school staff as well. Equally, the relationship between pupil enjoyment and mastery of – or confidence within – a subject was noted across all types of school.

ENJOYMENT IN THE CURRICULUM AS EXPERIENCED OCCURS WHEN THE TEACHER	
Gives praise	*And they enjoy it when they get it right, and for them, I think that all, they enjoy getting it right. They enjoy getting the praise when they get it right* (French teacher).
Gives encouragement	*If you can encourage them to work hard, participate, be more vocal, not just sit there and listen, but actually participate in the lesson, they start to see the success rate and the tests results being higher, the homework's being all right, instead of half right, they will start enjoying it. And enjoyment is very necessary* (maths teacher).
Teaches enjoyment	*Well, what I hope I have taught them is an enjoyment of what they are doing and I would like to think that they have a positive feeling about their ability to learn* (French teacher). *I would like them to feel you are talking about values, enjoyment based on learning, that learning is fun, that learning brings a sense of achievement ... enjoyment through achievement* (German teacher).

A further feature of pupil enjoyment related to the actual learning tasks, particularly opportunities for pupils' active and personal involvement. The teaching sample made references to:

- group work;
- variety;
- role play;
- choice;
- participation/being vocal/discussion;
- practical/'hands on;
- 'real life' information gathering (e.g. at libraries, travel agents);
- 'real' teaching aides (e.g. non-school TV, the internet, newspapers);
- fieldwork/trips out;
- personal research;
- IT opportunities;
- no homework;
- minimal writing;
- colouring tasks; and
- colourful/attractive worksheets.

Specific references to active learning approaches also featured more in the discourse of secondary teachers. In all, 24 of the secondary sub-sample mentioned enjoyment and active learning, compared to just six grammar school teachers. Twice as many of these were female teachers (21 compared to nine male staff). Seven of the 19 Year 7 teachers also discussed pupil enjoyment in terms of the teacher's ensuring active learning tasks.

Teachers on the necessity of 'non-enjoyment'

In contrast, sometimes teacher responses noted that pupils could not always have enjoyable curriculum experiences. Here, the view that tedium inevitably occurred in some learning tasks surfaced; and some sense of an imperative underpinning

and enforcing this non-enjoyment seemed evident. Non-enjoyment of the curriculum as experienced occurred because:

* theory had to be covered;
* it was necessary to write and take notes;
* certain things had to be learnt and reinforced at home; and
* sometimes learning was hard and repetitive.

Thus, according to some of the teacher sample, pupils were inevitably engaged in activities they did not enjoy, knowing (or having been told by the teacher) that these learning tasks were 'necessary' or 'important'. This viewpoint was expressed by teachers from both grammar and secondary schools.

NON-ENJOYMENT IN THE CURRICULUM AS EXPERIENCED OCCURS WHEN THERE IS:	
Theory	*Well, they don't enjoy the theory, especially when you are tantalisingly close to the workshop. ... But there's one period that, describing it, drawing it and copying down ... they don't really want to do that; they would rather use it* (technology teacher).
Writing and taking notes	*They don't enjoy the recording, having to settle down after they have been doing something that's enjoyable, to write about it. They really do hate it, but it's a skill they need to learn, I think* (science teacher).
Learning at home	*... so there is a certain necessity, if you like, to take notes, take them home, sit down and learn them, but they accept that as well, that* [learning] *just doesn't all go in because they are saying it and using it and dealing with it in the classroom. I think they accept the fact that they have to take it home, sit down and learn it, which they never find particularly exciting or enjoyable* (French teacher).
Hard/repetitive learning	*Sometimes it is not enjoyable. You have to be honest and face that fact. Sometimes, it is hard grind and repetitive and all the rest of it, but you have to overcome that and hopefully the nice bit will come after that and you can forget the old boring bit* (French teacher). *It's all very well making it interesting and enjoyable all the time, but you have still got to teach them maths at the end of the day* (maths teacher).
Assessment	*I find that I really at some stage have to say 'Right, this is how it works; learn this, please, and we will test you on this'. And for some of them I can see that that takes away from their enjoyment of it* (French teacher).
Homework	*Their perception is that you have to do homework so that brings everything down* (RE teacher).

A further viewpoint noted simply the occasions when pupil non-enjoyment occurred, citing particularly assessment as both a source of pressure and a general factor in diminishing pupils' enjoyment. A focus on homework was also recognised as a feature of pupils' curriculum as experienced militating against enjoyment.

7.7 Curriculum as internalised

When teachers spoke about enjoyment and pupils' learning in terms of internalising (i.e. actually understanding or mastering curriculum activities), two very different associations emerged in their discourse. These were, in effect, inversions of the direction of causality, i.e. some teachers emphasised that **internalisation resulted in enjoyment** (*I understand; therefore I enjoy*), while others spoke in terms of a belief that **enjoyment ensured internalisation** (*I enjoy; therefore I understand*). These seem quite stark differences, the former more readily conceding that, while actual experiences of the curriculum might not be fun or enjoyable at the time, the end result of internalisation meant engagement and satisfaction occurred eventually; the latter putting enjoyment of the task as a vital conduit or precursor to successful learning.

Thus, when the idea of internalisation/achievement resulting in enjoyment was evident, teachers pinpointed mastery and understanding; the successful completion of a task; and opportunities for success through guidance and modelling by the teacher. By the same equation, the occasions when there was 'no right answer' would count as achievement leading to enjoyment, as would the use of praise and encouragement, in that teacher reactions and behaviours were signalling achievement and esteem on behalf of the pupil.

When enjoyment was the mechanism or precursor to internalisation/achievement, then teachers generally pinpointed pupils' personal interest or investment in the learning activity: 'ownership' of the product in practical subjects or being encouraged to express personal ideas. Alternatively, identification with the content (or relevance) was cited: subjects that included references to home, family, personal interests like sport or hobbies were enjoyed and meant better learning. Manufacturing personal investment, e.g. through empathy work in history or English, similarly created an enjoyable personal investment in the content which ensured internalisation. Discussing adult issues, using real-life teaching aides, might similarly excite interest and investment, but perhaps implies that associations with 'school' and 'pupilness' are, by definition, less enjoyed by pupils.

Pupil perspectives on how enjoyment featured as a component of understanding or 'internalising' curriculum experiences were not greatly evident in the data. This in turn may reflect how rarely the criterion of enjoyment is made explicit in pupils' curriculum mastery, or that no specific question was posed which asked pupils to speculate directly on why and how they learn best. Notwithstanding this, several pupils mentioned in passing 'understanding' and 'learning better' because (or when) they experienced enjoyable learning opportunities, with some of the different criteria for enjoyment featuring in these remarks.

Thus, there were examples of internalisation happening if ...

* pupils felt they were 'having fun' and undertaking practical activities:

    Because you learn when you are having fun. You learn about levers when you are making toys and such. ... It's easier learning while you are having fun because sometimes you get really bored if people are explaining things to you. But it's really good when you are actually able to do the things. ... If someone says about levers and then you are able to go and make something that's to do with it, it sort of explains it more to you (female, Year 8).

It feels like an awful lot of work, but it's fun and you don't think you are getting much, but you are (female, Year 8).

I really enjoyed the science about the Tellytubbies because it was very funny and it made everything easier to understand (female, Year 9).

• pupils felt the teacher made them relaxed:

You can relax in her class. I think if a teacher makes you relax, you learn more (female, Year 10).

Some teachers are more relaxed, but you still get more work done (male, Year 10).

• pupils could learn from peers:

Interviewee: *I do like particular subjects. ... It's not all practical but* [the ones where] *you are working with your friends. It's easier to work* [in those]. *You think teachers always understand, but they don't always understand, because they are wiser like, but friends would.*

Interviewer: *Understand what?*

Interviewee: *Understand how well you are getting on with your work and if you need help. Teachers, you tell them, but some of them don't deal with it properly. Some of them just say 'You should do this' and then you still don't understand. If friends know, then they can tell you in an easier way and it's easier* [to understand] (female, Year 10).

And what of the other correlation between enjoyment and internalisation, namely that mastery and understanding create the experience of enjoyment? One example of this version of the direction of causality did surface in the interview programme:

Sometimes, when I say the maths was hard, it got boring. But whenever I understood, after a while I got really into it and really liked it (female, mid-engaged, high attainer, Year 9).

Another pupil hinted at how non-mastery contributed to lack of engagement and internalisation in turn:

[I don't like] *history and science. ... Whenever I go to those classes, I can't wait to get out* [because] *I am not good at them and they are dull and it makes it harder to learn* (male, low-engaged, high attainer, Year 10).

Whilst these remarks can represent only glimpses at the role enjoyment might play in internalisation, overall they do suggest that informal and active learning opportunities can have a significant – and perhaps understated – place in pupils' successful acquisition of the knowledge and skills contained in the NIC. The actual components of an enjoyable curriculum (e.g. variety, activity, collaborative learning) showed much similarity between pupils and teachers. However, pupils' remarks seem to suggest that this recognition does not always get translated into curriculum content or its mediation.

PART 2: PUPIL ENGAGEMENT

In the Year 9 and Year 10 pupil questionnaires, a specific item was included to encourage pupils' reflections on statements pertaining to how far they were involved and engaged in their learning. The following analysis considers pupils' responses to this item. The chosen statements on engagement included '*I find it hard to concentrate in some subjects*' and '*I find some subjects boring*'. These were intended to unpick how far the young people cited themselves as agents of curriculum disengagement as opposed to the curriculum itself being non-engaging. Other statements sought more general attitudes to school, such as whether or not the young person '*looked forward to coming to school*' or whether they felt they were '*doing well*' at school, and whether they could access help.

7.8   'I find it hard to concentrate in some subjects'

This section considers the extent to which pupils acknowledged whether or not they found it 'hard to concentrate' in some subjects, the intention being to explore issues surrounding pupils' assessment of their capacity to consistently focus upon and therefore access the curriculum.

Table 7.5   **Pupil responses to '*I find it hard to concentrate in some subjects*' overall and by gender**

	Year 9			Year 10		
Overall sample	**Yes %**	**No %**	**No response %**	**Yes %**	**No %**	**No response %**
Overall	74	22	4	82	17	1
Gender						
Boys	67	28	5	78	21	1
Girls	81	16	3	86	13	1

Source: *NIC Cohort Study: Years 9 and 10 Pupil Surveys*

Table 7.5 shows that:

- higher percentages of Year 10 pupils (82 per cent) acknowledged that they found it hard to concentrate than Year 9 pupils (74 per cent); and

- higher proportions of girls than boys in both year groups noted that they found it hard to concentrate in some subjects, although by Year 10, the gap had decreased, indicating that boys in Year 10 reported they were increasingly less able to concentrate in some subjects.

Other analyses revealed, perhaps somewhat surprisingly, that the acknowledgement that it was hard to concentrate in some subjects increased according to levels of attainment. For example, just over four-fifths (82 per cent) of Year 9 high attainers answered 'yes' to this question, compared with just under three-quarters of pupils in the middle group (73 per cent) and two-thirds in the low-attaining group (66 per cent).

Predictably, the opposite trend was identified when considering levels of engagement. Nearly all the Year 9 pupils in the low engagement category (97 per cent) stated that they found it hard to concentrate in some subjects, compared with just under half of high-engaged pupils (49 per cent). However, a striking feature is the increase in the proportion of pupils in Year 10 in the 'high' engagement category stating that they found it hard to concentrate in some subjects. This rose from just under half in Year 9 (49 per cent) to nearly two-thirds in Year 10 (62 per cent).

Pupils attending grammar schools were considerably more likely than pupils attending secondary schools to acknowledge that they found it hard to concentrate. For example, 91 per cent of Year 10 grammar school pupils as opposed to 76 per cent of Year 10 secondary school pupils found it hard to concentrate in some subjects.

7.9 'I find some subjects boring'

This section considers an indicator of the extent to which pupils acknowledged levels of interest in the curriculum, focusing on their attitudinal engagement with some subjects. Responses from pupils regarding the question of whether or not they found some subjects boring generally followed the trends identified previously in relation to acknowledgements of finding it hard to concentrate in some subjects. However, the overall results revealed that pupils in both year groups were more likely to state that they found some subjects boring than to say that they found it hard to concentrate in some subjects. Hence, it could be argued that disengagement was construed as resulting more from the curriculum (inaccessibility, irrelevance, etc), rather than from the pupils themselves.

Table 7.6   Pupil responses to '*I find some subjects boring*' overall and by gender

Overall population	Year 9			Year 10		
	Yes %	No %	No response %	Yes %	No %	No response %
Overall	81	9	10	95	5	0
Gender						
Boys	80	9	11	94	6	0
Girls	82	8	10	96	4	0

Source: *NIC Cohort Study: Years 9 and 10 Pupil Surveys*

Table 7.6 shows that only slightly more girls than boys (in both year groups) found some subjects boring – overall, the results show much commonality between the genders.

The numbers of pupils who noted that they found some subjects boring varied according to levels of attainment, ranging from about three-quarters of Year 9 low-attaining pupils (74 per cent) to just under nine-tenths of those in the high attainment group (89 per cent). This was also the case for the Year 10 cohort, in which nearly all of pupils in the upper attainment group stated that they found some subjects boring (98 per cent) compared to 91 per cent of low attainers.

In line with these findings, higher percentages of pupils attending grammar schools found some subjects boring than did pupils attending secondary schools. For example, just under nine-tenths of grammar school pupils (88 per cent) as opposed to just over three-quarters of secondary school pupils in Year 9 (77 per cent) found some subjects boring. Although this general trend is repeated in the Year 10 cohort, greater percentages of pupils acknowledged being bored, and this increase was especially apparent for pupils of secondary schools, as it was for low attainers.

7.10 'I look forward to coming to school'

This section focuses on pupils' responses to a series of statements for which they were asked to quantify, on a five-point scale, the extent to which they agreed or disagreed with them. The mean scores were calculated – the lower the mean score, the greater the level of agreement (see Table 7.7). Again, the intention was to investigate patterns of engagement and involvement with school in relation to various pupil and school characteristics.

Table 7.7   The degree to which pupils agreed 'I look forward to coming to school' in mean scores
1 = strongly agree; 5 = strongly disagree
(i.e. the lower the mean, the stronger pupils' level of agreement)

	Year 9	Year 10
Boy	3.6	3.6
Girl	3.3	3.1
Low-attaining pupils	3.5	3.5
Mid-attaining pupils	3.4	3.3
High-attaining pupils	3.4	3.3
Low-engaged pupils	4.3	4.3
Mid-engaged pupils	3.7	3.5
High-engaged pupils	2.3	2.2
Middle-class pupils	3.4	3.3
Working-class pupils	3.5	3.4
Pupils in schools with low FSM eligibility	3.5	3.3
Pupils in schools with medium FSM eligibility	3.4	3.4
Pupils in schools with high FSM eligibility	3.4	3.2
Secondary school pupils	3.4	3.3
Grammar school pupils	3.5	3.4
Pupils in small schools	3.5	3.4
Pupils in medium schools	3.3	3.3
Pupils in large schools	3.5	3.4
Overall mean	*3.4*	*3.4*

Source: *NIC Cohort Study: Years 9 and 10 Pupil Surveys*

When considering the entire sample, it is apparent that pupils tended to disagree slightly with the statement that they looked forward to going to school. In Year 9 and Year 10, boys were consistently less likely than girls to agree that they looked forward to attending school. Girls in Year 10 actually showed an increase in agreement with this engagement statement compared to their Year 9 score. Attainment levels had very little effect on the degree to which pupils looked forward to attending school, although those in the lowest categories were the least likely to look forward to school. For both year groups, the least engaged pupils were by

far the most likely to acknowledge that they did not look forward to going to school. Similarly, the most engaged pupils agreed that they looked forward to attending school.

7.11 'I find most of my subjects interesting'

Pupils were asked to respond to a statement that they found most subjects interesting, designed to provide insights into their involvement with the curriculum. It is interesting to note that pupils were more likely to acknowledge that they found most subjects interesting than they were to agree that they looked forward to going to school (see Table 7.8).

Table 7.8   The degree to which pupils agreed 'I find most of my subjects interesting' in mean scores
1 = strongly agree; 5 = strongly disagree
(i.e. the lower the mean, the stronger pupils' level of agreement)

	Year 9	Year 10
Boy	2.7	2.9
Girl	2.6	2.6
Low-attaining pupils	2.6	2.7
Mid-attaining pupils	2.6	2.7
High-attaining pupils	2.8	2.8
Low-engaged pupils	3.8	3.9
Mid-engaged pupils	2.5	2.6
High-engaged pupils	1.9	1.9
Middle-class pupils	2.7	2.7
Working-class pupils	2.7	2.8
Pupils in schools with low FSM eligibility	2.8	2.9
Pupils in schools with medium FSM eligibility	2.6	2.8
Pupils in schools with high FSM eligibility	2.6	2.5
Secondary school pupils	2.6	2.7
Grammar school pupils	2.9	2.9
Pupils in small schools	2.6	2.6
Pupils in medium schools	2.6	2.7
Pupils in large schools	2.8	2.9
Overall mean	*2.7*	*2.8*

Source: *NIC Cohort Study: Years 9 and 10 Pupil Surveys*

Year 9 pupils were slightly more likely than Year 10 pupils to agree that they found most subjects interesting, and girls were also slightly more inclined than boys to acknowledge this, especially in Year 10. Pupils in all attainment groups were fairly consistent in the level of agreement that they found most subjects interesting, although in both year groups, high attainers acknowledged this to a slightly lesser extent. Similarly, there was a greater acknowledgement that most subjects were interesting from secondary school pupils than from grammar school pupils in both year groups. A different pattern is evident when pupils' levels of engagement are considered, which suggests that those pupils who were the most disengaged were by far the least likely to acknowledge that they found most subjects interesting. Conversely, the most engaged pupils agreed heavily with this statement in both years.

7.12 'I know I can always ask for help when I don't understand'

This section focuses on the extent to which pupils considered they could ask for help (see Table 7.9). Alongside academic or subject-related issues, notions of feeling isolated from the curriculum and its providers may be key factors in disengagement. For example, if pupils who are struggling with subject content feel that they cannot easily access the appropriate assistance, their disengagement may be compounded. Equally, as Part 1 showed, a sense of having a supportive teacher added to enjoyment of the curriculum.

Table 7.9 The degree to which pupils agreed '*I know I can always ask for help when I don't understand*' in mean scores
1 = strongly agree; 5 = strongly disagree
(i.e. the lower the mean, the stronger pupils' level of agreement)

	Year 9	Year 10
Boy	2.3	2.5
Girl	2.3	2.3
Low-attaining pupils	2.1	2.0
Mid-attaining pupils	2.2	2.3
High-attaining pupils	2.6	2.6
Low-engaged pupils	2.8	2.8
Mid-engaged pupils	2.3	2.3
High-engaged pupils	1.9	2.0
Middle-class pupils	2.5	2.5
Working-class pupils	2.2	2.3
Pupils in schools with low FSM eligibility	2.5	2.6
Pupils in schools with medium FSM eligibility	2.2	2.3
Pupils in schools with high FSM eligibility	2.0	2.0
Secondary school pupils	2.1	2.2
Grammar school pupils	2.7	2.7
Pupils in small schools	2.1	2.1
Pupils in medium schools	2.2	2.3
Pupils in large schools	2.5	2.5
Overall mean	*2.3*	*2.4*

Source: *NIC Cohort Study: Years 9 and 10 Pupil Surveys*

Pupils were generally very inclined to agree that they felt that they could always ask for help, Year 9 pupils slightly more so than Year 10 pupils. In Year 10, girls agreed with this statement to a marginally higher degree than boys. Interestingly, in both years, high-attaining pupils did not feel that they could always ask for help to the same extent as their low- and mid-attaining peers. The reverse pattern can be seen in terms of engagement, as the more engaged pupils were far more likely to acknowledge that they could always ask for help than the lesser engaged pupils. Pupils attending schools with low levels of free school meal eligibility (reflecting increased affluence and social class) felt less able to always ask for help than those in schools with higher levels in both year groups. Similarly, secondary school pupils were considerably more likely to agree that they could always ask for help than were grammar school pupils.

7.13 'I am doing well at school'

This section presents insights into the extent to which pupils agreed with a statement relating to their school performance as a means of assessing their perceptions of their engagement with school (see Table 7.10). The association of mastery of learning tasks and enjoyment, as cited by some teachers in Part 1, is further explored here.

Table 7.10 The degree to which pupils agreed '*I think I am doing well at school*' in mean scores
1 = strongly agree; 5 = strongly disagree
(i.e. the lower the mean, the stronger pupils' level of agreement)

	Year 9	Year 10
Boy	2.4	2.4
Girl	2.4	2.3
Low-attaining pupils	2.5	2.4
Mid-attaining pupils	2.4	2.3
High-attaining pupils	2.3	2.3
Low-engaged pupils	2.8	2.7
Mid-engaged pupils	2.4	2.3
High-engaged pupils	2.1	2.0
Middle-class pupils	2.3	2.3
Working-class pupils	2.4	2.4
Pupils in schools with low FSM eligibility	2.5	2.4
Pupils in schools with medium FSM eligibility	2.4	2.3
Pupils in schools with high FSM eligibility	2.2	2.2
Secondary school pupils	2.4	2.3
Grammar school pupils	2.5	2.4
Pupils in small schools	2.3	2.3
Pupils in medium schools	2.5	2.3
Pupils in large schools	2.4	2.3
Overall mean	*2.4*	*2.4*

Source: *NIC Cohort Study: Years 9 and 10 Pupil Surveys*

It is noteworthy that there were only slight differences in extent to which pupils in low, medium and high attainment groupings in both years agreed that they were doing well at school. When considering pupils' levels of engagement with school, greater differences can be identified. In both year groups, the less engaged pupils were, the less likely they were to agree that they were doing well at school.

7.14 'I worry about some subjects'

This section considers the extent to which pupils agreed that they worried about some subjects as a further means of assessing pupils' levels of engagement and involvement with school and the curriculum (see Table 7.11).

Table 7.11 **The degree to which pupils agreed 'I worry about some subjects' in mean scores**
1 = strongly agree; 5 = strongly disagree
(i.e. the lower the mean, the stronger pupils' level of agreement)

	Year 9	Year 10
Boy	2.5	2.6
Girl	2.2	2.3
Low-attaining pupils	2.5	2.5
Mid-attaining pupils	2.4	2.4
High-attaining pupils	2.3	2.4
Low-engaged pupils	2.3	2.4
Mid-engaged pupils	2.4	2.4
High-engaged pupils	2.4	2.5
Middle-class pupils	2.3	2.4
Working-class pupils	2.4	2.5
Pupils in schools with low FSM eligibility	2.3	2.4
Pupils in schools with medium FSM eligibility	2.3	2.5
Pupils in schools with high FSM eligibility	2.5	2.4
Secondary school pupils	2.5	2.5
Grammar school pupils	2.2	2.3
Pupils in small schools	2.5	2.6
Pupils in medium schools	2.3	2.4
Pupils in large schools	2.3	2.4
Overall mean	*2.4*	*2.5*

Source: *NIC Cohort Study: Years 9 and 10 Pupil Surveys*

Year 10 pupils appeared to worry slightly less about some subjects than Year 9 pupils did, and girls were also more likely than boys to acknowledge that they worried. Grammar school pupils in both year groups agreed that they worried about some subjects to a greater extent than secondary school pupils did.

7.15 Some concluding remarks

The preceding sections have presented insights into pupils' levels of engagement and involvement with school, analysed in terms of a series of variables. This section now provides some concluding comments, focusing on the major issues and points, some of which confirm and reinforce, as well as contributing further dimensions to, established views.

It is possible to propose a subtle, but noticeable, drop-off in pupils' engagement with school, in terms of expressions of interest in school and curriculum activities, between Year 9 and Year 10. This is illustrated, for example, by more pupils finding it hard to concentrate and more saying that they found some subjects boring. Within this overall trend, certain groups and types of pupils were more likely to exhibit these signs than others. As could be expected, the pupils who were least engaged showed the most dissatisfaction with their school experiences. Perhaps surprisingly, by Year 10, the highest attainers were increasingly likely to state that they were finding it hard to concentrate and that they found some subjects boring.

Boys traditionally have been seen as being particularly vulnerable to disengagement from school. The transition from Year 9 to Year 10 shows that, although girls were generally more likely to acknowledge that they found it difficult to concentrate, by Year 10, boys were becoming increasingly likely to say this, indicating increasing disengagement from school. It is interesting to note that boys were also less likely than girls to agree that they worried about some subjects, and in Year 10 were less likely to acknowledge that they felt they could ask for help. Girls were also more likely to agree that they looked forward to coming to school. Hence, boys appeared to be slightly more dislocated from school.

Grammar school pupils were more likely to acknowledge that they found it hard to concentrate and that some subjects were boring, and they agreed less strongly than pupils attending secondary schools that they found some subjects interesting. Grammar school pupils displayed further signs of disengagement in that they were slightly more likely to acknowledge that they were not doing well at school. Moreover, they were markedly less likely to be able to ask for help and agreed that they looked forward to attending school less than secondary school pupils did.

It is also interesting to note that pupils in the highest attainment categories were also the most likely to display possible signs of disengagement, such as finding some subjects boring and feeling the least able to ask for help. However, these pupils were also the most inclined to agree that they looked forward to coming to school.

Pupils (in both years) were more inclined to say that **subjects** were boring than that **they** themselves had concentration problems. Hence, perhaps the curriculum, rather than the self, was being pinpointed as a major cause of disengagement.

PART 3: ENGAGEMENT AND ENJOYMENT OBSERVED

In order to gain further insight into pupils' enjoyment of and engagement (or lack of) with the curriculum, an analysis was undertaken of three of the full-day classroom observations conducted in the case-study schools and the subsequent post-observation interviews with pupils. For each year of Key Stage 3, an observation was chosen which involved classmates of differing levels of engagement and attainment, as shown below. (Pupils' names have been changed to preserve anonymity.)

YEAR 8: analysis of a full-day observation in a secondary school, involving:

    Euan: low-engaged, high attainer;

    Tom: mid-engaged, mid-attaining pupil; and

    Harriet: high-engaged, low attainer.

YEAR 9: analysis of a full-day observation in a secondary school, involving:

    Brendan: low-engaged, low attainer;

    Caroline: mid-engaged, low attainer; and

    Joshua: high-engaged, high attainer.

YEAR 10: analysis of a full-day observation in a grammar school, involving:

    Craig: low-engaged, high attainer; and

    Daniel: high-engaged, high attainer.

The key findings to emanate from the analysis of these observations and the post-observation interviews are presented in two parts: a summary of the main themes to emerge is presented (see 7.16), followed by descriptive comments detailing individual pupils' accounts of the most or least enjoyable lesson of the observed day (see 7.17).

7.16 Main themes emerging from the observations

From the analysis of the observations and the post-observation interviews, a number of main themes emerged. Firstly, there were commonalities in the reactions and observed behaviours of the pupils according to their level of engagement. All the high-engaged pupils shared a positive outlook, and all the low-engaged pupils employed work-evasion tactics. Despite the similarities in the classroom behaviour of the low-engaged pupils, however, there was also evidence of the individual nature of the roots of disengagement. Further, the observations and the youngsters' responses provided further clarification of the role of the teacher and the activities key in maintaining pupils' enjoyment of lessons. Each of these main themes is described in greater detail below.

7.16.1 Positive outlook of high-engaged pupils

The high-engaged pupils were positive about the lessons they experienced on their observed days. Harriet enjoyed every lesson – '*I liked them all*' – whilst, for Joshua, the only unpalatable aspect was break time '*because you don't have anything to do except stand and look at each other*'. Daniel disliked his second single period of French for the day because it had not extended his learning. It is interesting perhaps that he did not highlight RE, the lesson which his classmate, Craig, had least enjoyed and during which the general behaviour of their class declined into what the researcher present described as '*shouting*', '*noisy, deliberate, challenging coughing*' and '*silly noises*'. Daniel took no part in this and did not know what had led his class to be '*really fidgety ... all worked up ... hyper really*' during the lesson, possibly suggesting that he was not prone to the feelings which incited this behaviour.

7.16.2 Evasion tactics of low-engaged pupils

Although a lack of engagement was not necessarily evident in a pupil's behaviour in the classroom (see Tom's cameo in 7.17), each of the low-engaged pupils was seen to involve themselves in work-evasion tactics.

- In a geography lesson, during which the class was required to draw a map showing the location of shanty towns in Kenya, Brendan was noticed '*talking to the pupil behind him, while the class continues with the work*' and '*walking around the classroom, standing at the teacher's desk, sharpening pencils, then walking around again*'.

- In his art lesson, in which he was required to continue his still life painting in a Cubist style, Craig was persistently observed talking to his neighbours, while the rest of the class '*focused well*': '*Craig is getting on but he is gossiping and chattering as well*'; '*Craig is really not getting on, he is distracted and lost in conversation*'; '*Craig's group is still the centre of some gossip*'.

- Euan was continually seen '*whispering*' or '*talking*' in his lessons, and he was the only low-engaged pupil to be strongly reprimanded by teachers: once for hiding a classmate's school bag, and secondly, in a music lesson when he was moved to the front for flicking his pen across the room.

Interestingly, however, Craig and Euan, both low-engaged, high-attaining pupils, were selective in their misdemeanours. Craig, for example, '*gossiped*' in his art class where '*we are allowed to talk*', but '*I didn't start talking*' in his '*boring*' RE lesson during which many of his classmates were '*extremely noisy*', presumably because he was aware that this was unacceptable behaviour in this setting. Equally, in his music lesson, after being scolded for throwing his pen, Euan made amends: he answered the teacher's next question to receive praise, and five minutes later, as the behaviour of much of the class degenerated, it is observed that: '*Euan seems much more interested now and participates by answering lots of questions*'. Further, Euan did not instigate disobedience: the researcher noted he was drawn in as a group of boys who had been '*carrying on*' from the beginning of the lesson grew increasingly disruptive.

7.16.3 Roots of disengagement

There was evidence of how personal the stimulus of disengagement could be. Take, for example, Craig and Euan: although both were low-engaged, high-attaining pupils, the source of their dissatisfaction appeared very different. For Euan, the stimulus of his disengagement appeared to be **the sedentary nature of school**. His most enjoyed lesson was geography during which the class had completed a traffic survey in the town centre: '*Being outside in the town. You got to do whatever you wanted.*' In contrast, his least enjoyed lesson was maths: '*We just had to sit and do all the different sums.*' His suggestion to improve this maths lesson was '*going outside – we've done this before and counted different kinds of cars and put them all down then done tables and bar charts*'. For Craig, the stimulus of his disengagement in the classroom appeared to be **a lack of challenge**. His most enjoyed lesson was maths '*because it was more difficult than usual*' (as shown in a cameo to follow), whereas his least enjoyed lesson was RE: '*The dictation at the start was probably the most boring. It was just like writing, but then the debate at the end was a bit more better.*' And his suggested improvement that the class should have been given '*questions or something to do, not just dictation, because we have done that*' would have increased the challenge of the lesson. With Craig, it appeared that the challenge had to be achievable. He felt that his classmates had most enjoyed their art lesson on the observed day because '*... most of them are quite good at art, so it's enjoyable*'; he, however, '*was just not happy at art*' and because of this, his behaviour suffered: '*Because I find it difficult, I decided to talk.*'

Although the root of their disengagement in the classroom was different, it may be significant that when both these low-engaged, high-attaining pupils recounted why they had disliked a lesson and suggested improvement to it, they referred to the style of **mediation**. In contrast, when Daniel, a high-engaged, high-attaining pupil, relayed why he had not enjoyed French, he cited the **content** of the lesson which he felt had not expanded his learning. This may provide some indication of the different mindsets of high- and low-engaged, high-attaining pupils: that mediation can disengage low-engaged high attainers, but high-engaged high attainers can rise above this. For Brendan, a low-engaged low attainer, as shown in his cameo below, it appeared that the effort involved as well as the mediation and content contributed to his dislike of his history lesson.

7.16.4 The role of the teacher

The importance of the teacher's role in maintaining pupils' level of engagement during the course of a lesson emerged clearly in the observations. In three of the lessons in which observed pupils felt their classmates had experienced difficulty in concentrating, the teacher had been unable to assert their authority over the pupils and prevent the class from talking. Caroline, for example, relayed how the lack of engagement evident in her sport and recreation lesson – '*... everybody just turned off and messed around*' – was '*... because of the teacher. She's not very good at controlling us. She doesn't make you sit down and do your work or nothing*'.

7.16.5 Features of enjoyable lessons

Finally, although much has been said already in this chapter regarding the types of activities which pupils found enjoyable, the observations and related post-observation interviews provided further confirmation of the importance of activity and practical tasks in enjoyed learning.

Four of the eight pupils whose observations were analysed highlighted a class which involved practical work as their most enjoyed lesson of the day. Euan and Tom both cited their geography lesson, during which they had conducted a traffic survey in the town centre; and Daniel and Brendan identified art lessons. However, it was evident from their responses that it was not only the practical nature of the tasks that they found appealing.

For Daniel, a high-engaged high attainer, enjoyment was gleaned from the freedom and rare opportunity to work under his own direction afforded to him in art – '... *it's nice sometimes just to get away and be able to do your own thing without the teachers telling you what to do*' – thus again noting the ingredient of 'autonomy' highlighted earlier.

For Brendan, a low-engaged low attainer, the appeal lay in the manageability of the work and the lesser effort involved after a day in which he had done a French test, drawn a map and answered questions about Kenyan shanty towns in geography, learnt how to spell 'ie' words in English, calculated probability in maths, and written a newspaper article about 'The Flight of the Earls' in history: '*We were drawing, just ordinary drawing ... you didn't have to do very much. All you had to do was sit down and draw.*'

Finally, the extent and challenge of learning emerged in the observation data. As highlighted earlier, Craig's most enjoyed lesson challenged him in the conceptual level of the work, and Caroline relayed how she felt she and the rest of her class had enjoyed their geography lesson because '*we learnt loads*'. Moreover, Daniel and Tom cited lessons that involved little new learning as their least enjoyed of the observed day. Thus, when pupils were given opportunities to focus very specifically on recent and actual enjoyed curriculum experiences (rather than general and retrospective reflection), the ingredient of 'mastery' surfaced more forcefully. The importance of differentiation (see Chapter 6) may thus be a final implication from this analysis.

7.17 The cameos

Presented below are six cameos which describe the observed lessons that individual pupils enjoyed most or least. For each cameo, details of the lesson – the task involved and the pupil's behaviour as taken from the observation – are given first, followed by the pupil's responses in the post-observation interview and then an analytical comment. The cameos were chosen in order to highlight the reactions of pupils exhibiting differing levels of engagement, so for both the 'most enjoyed lessons' and the 'least enjoyed lessons', a cameo for a low-, mid- and high-engaged pupil is presented.

Most enjoyed lessons

YEAR 10 – CRAIG: LOW-ENGAGED, HIGH ATTAINER	
Lesson	Maths
Task	A 40-minute maths lesson in which pupils were introduced to 'the hardest elimination method' to work out simultaneous equations, and were then required to complete some calculations.
Observed behaviour	During the lesson, the class was continually observed to be '*very quiet*', '*very attentive and on task*' and '*all working well*'. Craig was seen '*concentrating well, as is the rest of the class*'.
Pupil's view	Craig identified this as the most enjoyable lesson of the observed day '*because it was more difficult than usual – it was harder*'. He also remarked that out of all his lessons, he had learnt most during this maths class.
Comment	A high-attaining but low-engaged grammar school pupil, Craig's most enjoyed lesson challenged him in the conceptual level of the work. In his reference to the work being '*harder*' and '*more difficult than usual*', there was perhaps the implication that he was seldom stretched. Given the high level of attention that was observed for the class as a whole, it is possible that others shared Craig's feeling and were enjoying the challenge. Indeed, the researcher in the classroom noted how '*interesting*' it was that '*when the children are given something that is relatively challenging for them and it is put forward as being hard, they knuckle down to it and they are concentrating extremely well*'.

YEAR 9 – CAROLINE: MID-ENGAGED, LOW ATTAINER	
Lesson	Geography
Task	A 40-minute lesson, during which the class was required to draw a map showing the location of shanty towns in Kenya, and then answer related questions from the textbook.
Observed behaviour	Throughout the lesson, the class was observed to be '*working well*' and '*very quiet*', which the researcher noted was '*unusual*' compared with other lessons. All of the class were producing '*very colourful maps*', including Caroline who was continually observed to be '*working away*'.
Pupil's view	Caroline felt that this was the lesson which she and her classmates had enjoyed most and found most interesting '*because we learnt loads of geography. We sat down and studied*'. She found it '*far better*' because '*we were doing more work and all*'.
Comment	For Caroline, the appeal of the lesson was in the amount of learning that had taken place – a feeling that she believed had been shared by the rest of the class. Her reference to '*sitting down and studying*' is noteworthy perhaps given that pupils' dislike of sedentary tasks has been a recurring theme of this chapter. Very similar to Craig's comments above, Caroline's response shows another aspect of pupil enjoyment: the sense of achievement inherent in '*learning loads*'.

YEAR 8 – HARRIET: HIGH-ENGAGED, LOW ATTAINER	
Lesson	History
Task	The teacher introduced a new theme on the 'Normans in Ireland'. The lesson was fast paced with the teacher '*talking all the time*' and the pupils were required to answer three sets of questions and draw a map in the course of this 40-minute class.
Observed behaviour	After some initial noise, the teacher asserted his control over the class, and for the rest of the lesson, the pupils were '*very quiet*'. Harriet was seen to be working hard – '*keeping her head down*' – but the researcher also noted how '*strained*' she looked: '*Harriet is sitting holding her head, looking very tired.*'
Pupil's view	Perhaps reflected in her '*strained*' appearance in the lesson, Harriet identified this as the most difficult class of the observed day; however, it was also the most enjoyable. She was very uncertain as to the reason why she had liked the lesson – '*I don't know why*' – and when prompted by the researcher, her responses were no more revealing: she liked the teacher but also '*I like what we're doing*', though it was not just this particular subject matter which was appealing, because '*I like doing them all*'.
Comment	A high-engaged but low-attaining pupil, it is perhaps significant that Harriet was so uncertain why she had enjoyed this lesson (additionally, there was nothing she disliked on the observed day). Interestingly, some reluctance to draw attention to herself was apparent in her behaviour – '*keeping her head down*', as the researcher noted.

229

Least enjoyed lessons

YEAR 9 – BRENDAN: LOW-ENGAGED, LOW ATTAINER	
Lesson	History
Task	During this 40-minute lesson, the class continued to write a newspaper article on the 'Flight of the Earls'.
Observed behaviour	Throughout the lesson, Brendan was observed to be '*quiet*' and apparently '*on task*', as was the rest of the class.
Pupil's view	Citing this lesson as the least enjoyed of the observed day, Brendan bemoaned each aspect of it: the mediation – '... *it's just all "do this, do that"*'; the content – '... *the Nine Years War, too boring ... no great stories about it*'; and the effort involved – '*work, work, work, work*'. He was open about his lack of engagement with the lesson: '*That's not too say I don't do my work. I do do my work. I sit down and do my work and just take all what the teacher says but that's it – in the door, out the door ... I forget what it is all about.*'
Comment	As Brendan acknowledged, his lack of engagement did not outwardly manifest itself in misbehaviour, though he completed the tasks set without any enthusiasm and with little retention of what had been learnt. It is noteworthy that he, a low-engaged and low-attaining pupil, should identify the mediation, content and the effort involved, as contributing to his dislike of the lesson, whereas Craig and Euan, both low-engaged, but high-attaining pupils, solely cited mediation as the reason for the lessons they disliked. It is also interesting to contrast his perspective with that of his classmate, Caroline (see her earlier cameo). Both were low-attaining pupils, so both presumably experienced some difficulty with the level of work. Caroline, however, who was more engaged, took pleasure in the learning process, whereas for Brendan, his main focus was on surviving the lesson.

YEAR 8 – TOM: MID-ENGAGED, MID-ATTAINING PUPIL	
Lesson	Maths
Task	A 40-minute lesson with a substitute teacher in which pupils had to measure the dimensions of different shapes and calculate the area and perimeter of each.
Observed behaviour	The class's behaviour during this lesson was seen to deteriorate from '*a low hum of noise*', to '*the whispering gets louder*', to '*there is a lot of noise and pupils are talking to others across the classroom*'. Tom was not involved in this. Instead, it was observed that '*Tom is working through the questions quite quickly*'; '*Tom is working away and selecting different coloured pencils to complete his questions*'; and '*Tom is working away*'.
Pupil's view	'*Maths was nothing. I had to do angles and just learnt the vertical and horizontal lines.*' '*Maths* [wasn't important or useful]. *It's just we've done it before.*'
Comment	Although from Tom's behaviour in the classroom it appeared that he was engaged in the lesson, his response to the lesson shows that he saw no relevance in the task in hand and felt that he learnt nothing because he had studied it previously. Further, when he was '*working away*', he was not only completing the assigned questions, but in addition he did the homework due to be handed in that lesson '*because I didn't do it*'. This perhaps reveals how deceptive a pupil's behaviour can be and that a lack of engagement may be masked by compliance.

YEAR 10 – DANIEL: HIGH-ENGAGED, HIGH ATTAINER	
Lesson	French
Task	The class's second single period of French on the observed day, during which they finished one written exercise, constructing sentences to appear under signs. They then completed a worksheet for which they had to write orders in French.
Observed behaviour	During the lesson, the class '*listened fairly quietly*' to the teacher's explanations. Daniel was observed to work through the exercises '*quite quickly*'.
Pupil's view	Daniel regarded this as the least enjoyable lesson because: '*We had already had French and it was pretty much the same thing. There wasn't anything very new. ... We should have moved on.*'
Comment	Daniel disliked this French class because it had not extended his learning. Inadvertently, this disapproval of a lack of new learning may be indicative of his high level of engagement with his studies. More generally, there may be an issue here regarding the 'Curriculum as Planned' in that even a high-engaged pupil found two separate periods of the same subject in one day difficult to digest.

7.18 Conclusion

A number of key issues emerge from this analysis of the conceptualisation and import of enjoyment as a curriculum characteristic. Central to the theme of enjoyment are the alternative 'formulae' or interpretations of a direction of causality: namely '*we enjoy; therefore we learn/master*' versus '*we learn/master; therefore we enjoy*'. The idea that learning can't always be enjoyable, and that work/learning and '*fun*' are, in effect, absolute antonyms, did surface in both pupils' and teachers' rhetoric. At other times, the interview data suggested that enjoyment not just leavened but actually underpinned curriculum engagement and involvement with learning. Moreover, the data suggest that it is the less engaged and lower-attaining pupils who particularly operate with the former 'formula'. Equally, given some of the findings relating to greater enjoyment levels among pupils in secondary schools and those with high FSM numbers, it may be that teachers who work with pupils traditionally thought of as 'at risk' of disengagement actually give enjoyment greater emphasis.

Another central theme must be how crucial teacher mediation is to pupil enjoyment. Teacher performance, enthusiasm and choice of pedagogical tasks all surfaced as ingredients of enjoyment, as did, from the pupils' perspective, those teachers who were '*fun*', '*funny*' and created a '*relaxed*' atmosphere. It was evident that low-engaged and low-attaining pupils made a much starker renunciation of lessons where the teacher was not liked or was perceived as a poor mediator. The observation data similarly showed how only high-engaged pupils could rise above mediation and construct positive outcomes and enjoyment from content alone. Those mediation characteristics highlighted by pupils as aiding enjoyment, such as providing help, taking time to explain, making it easy to understand, all surely conveyed a sense of investment in the individual learner by the teacher.

Curriculum experiences involving fun, creativity and practical work were consistently highlighted by all pupils. 'Variety' was noted particularly in Year 9, along with class discussion and cooperative work. Higher-engaged and high-attaining pupils selected autonomy and choice as sources of enjoyment. Most significantly, enjoying work calibrated to ability (i.e. differentiation) was not in the low-engaged pupils' discourse: for them, enjoyment and fun equated with a '*laugh*' and '*not working*'.

The sheer strength of pupils' accounts of non-enjoyment experienced as monotony, isolation, passivity and sedentariness (*always* or *just ... sitting, ... reading, listening, ... writing*) was a particularly powerful theme emerging from the data. Again, differences between low- and high-engaged pupils related to the selectiveness and severity of this dislocation. A stoic resignation and a capacity to cope with non-enjoyment were evident in the discourse of higher-engaged and attaining pupils.

Not surprisingly, practical and physical subjects (PE, technology, IT, art) were rated highly for enjoyment, but another important theme is surely that the vast majority of subjects showed a decline in enjoyment ratings over the Key Stage. Equally, although the high FSM sub-sample gave higher ratings to subjects, they showed a steeper decline in enjoyment. In comparison, the low FSM sub-sample showed less fall-off and more consistent ratings for subjects enjoyed throughout

Key Stage 3. This was especially the case in English, maths and science. A marked loss or decay of low attainers' enjoyment throughout the Key Stage was evident. Hidden within those findings also was the degree of fall-off in Year 9 for girls; grammar school pupils (especially in science, French and maths); and also for the low-engaged. All of this may suggest that pupil enjoyment and engagement are vulnerable after the first year of Key Stage 3, and those traditionally 'at risk' of curriculum and education dislocation are particularly prone to this decline. It suggests somehow that the novelty value of the 'new' Key Stage curriculum wears off or even perhaps that teachers retreat from an initial Year 8 focus on ensuring enjoyment when planning and mediating curriculum experiences.

8. THE CROSS-CURRICULAR THEMES

8.1 Introduction

The NIC sets out four cross-curricular themes for study at Key Stages 1 and 2: Information Technology (IT), Health Education (HE), Cultural Heritage (CH) and Education for Mutual Understanding (EMU). In addition to these, at Key Stages 3 and 4, two further themes are specified: Careers Education (CE) and Economic Awareness (EA). This chapter discusses pupils' perceptions of these cross-curricular themes (CCTs). Each year in the annual pupil questionnaire, items on IT and HE were included for those pupils who had studied these as separate subjects, and in Year 10, a question on CE was added. Additionally, all case-study pupils in Year 7 and a sub-sample each year in Key Stage 3 were asked about their experiences of the CCTs. To provide context, in their interviews, their teachers described how they had incorporated the themes into their teaching of these pupils, and senior managers were asked about the organisation of CCTs in the school. In the annual school questionnaire, a question was also included on the planning of CCTs.

This chapter will consider the CCTs under the typology used elsewhere in this report. The Curriculum as Specified, Planned and Mediated describes schools' and teachers' coverage of the CCTs, and views on their roles in the NIC. The Curriculum as Experienced and Internalised discusses each of the themes from the pupils' perspective.

8.2 CCTS as specified

There was some evidence that teachers were divided in their views of the merit of the CCTs in the NIC. Interviewees tended to fall into three broad camps.

♦ Apparently indifferent: the most populous group comprised those staff who did not express any views in favour or against the presence of the CCTs in the curriculum. From this, it might be tentatively surmised that these interviewees were largely indifferent about the CCTs.

♦ Active enthusiasm: those, including senior managers interviewed at post-primary level, who were convinced of the importance of the CCTs: '*I think they are probably the strongest contribution that the school makes to those children*' (principal).

♦ Negative: though a relatively small group, some interviewees were negative about the CCTs and gave them little consideration – '*I don't really think about them*' – preferring to concentrate solely on their own subject: '*I am more concerned with getting the pupils interested in French*' (French teacher).

There were also a number of longstanding teachers who, whilst in favour of what the CCTs stood for, resented the fact that they had been '*labelled*' in the NIC, because '*if you're doing your job half reasonably well, then you'd be doing that anyway*' (science teacher). For these teachers, the requirements for the CCTs had not made them re-evaluate their practice. A number of other interviewees, also acknowledging that the CCTs '*would have been there anyway*', did believe,

however, that their specification in the NIC meant that at both whole-school and classroom level, they were given more emphasis.

Several teachers highlighted that the '*overloaded*' nature of the NIC rendered it difficult to incorporate the CCTs into their subjects. It was said that the amount of work to be covered meant that they constantly had to '*push on*' with the work, leaving no time to refer to the CCTs, especially IT. It should be noted though that a few interviewees did not see this problem, but felt rather that the Programmes of Study covered the themes: '*Looking at the Programme of Study, it all fits in. They're nearly written well enough that you can easily manage it*' (maths teacher).

Concern was expressed over the status of IT as a CCT. Teachers remarked that IT should be a subject in its own right: '*I do think that IT may be, rather than just a cross-curricular theme, I think it should be part of the curriculum.*' Several interviewees did not believe that as a CCT, pupils received adequate provision of IT. It will be shown later that the pupils themselves shared these views.

8.3 CCTs as planned

In case-study work in the post-primary schools, senior managers were asked about the organisation of the CCTs in their schools. In each of the five schools, there was a coordinator responsible for each of the themes: '*You can't have cross-curricular themes unless you have some form of coordination*' (principal). Typically, the role of the coordinator entailed the collection and dissemination of resources pertaining to that CCT; ensuring the theme was addressed across the curriculum; and advising heads of department and staff on how to achieve this in their subject area. In two schools, a Vice-Principal oversaw the CCTs; in one case, it was said to raise their status in the school. Two schools had conducted audits in order to ascertain where the CCTs were covered in the curriculum, and to ensure all objectives were addressed.

There were clear differences between the schools in terms of the priority they gave to the CCTs. In one school, they were given particular prominence. Firstly, the personnel encharged with the CCTs had a high status in the school. The coordinators for EMU and CH had each been given responsibility points for their roles, and the staff member responsible for HE, once head of science, had given up this role as a departmental head in order to concentrate on coordinating HE and pastoral care in the school. Secondly, training had been provided, both on non-contact days for all staff, and specialist INSET for CCT coordinators. In addition, the school felt it had provided the resources to enable IT to be covered across the curriculum. Every teacher had a computer and printer in their classroom; and each department had a laptop for staff to work on at home. Perhaps as a result of this high profile at whole-school level, the teachers interviewed in this school appeared to cover the CCTs more extensively than those in the other case-study schools. In the school which, from teachers' accounts, appeared to have the least coverage, the CCTs had a lesser status. A number of the interviewees were not aware that there were CCT coordinators; departments' IT facilities were variable, and a senior manager was in some doubt whether the school policy on CCTs was implemented: '*It's something on paper, whether it actually happens or not ...?*' Indeed, this was the only school where no mention was made of the CCTs on departmental schemes of work.

The next section will discuss the mediation of the CCTs in the classroom. However, it should be acknowledged that it was not only through the curriculum that the CCTs were addressed. Senior managers also described how the themes, especially CH and EMU, were covered in assembly – '*the whole area of EMU and cultural heritage would take a big element of school assemblies*' – and in particular, how they were conveyed through the ethos of the school. This principle of respect for others was fundamental in all of the schools. However, as would be expected, the way in which this was emphasised was different as each school's ethos was individual. In one Catholic-managed school, for example, there was a celebration of Irish culture (music, dancing, sport), with the aim of encouraging pupils to recognise that Irishness was part of their identity in the hope that '*if you can respect that in yourself, then you can respect different identities, different cultures in other people*' (principal). Another school was integrated so '*would push the whole thing of integration and the values that we consider round that, that they respect each other and each other's beliefs and backgrounds*' (head of year). In another school, pastoral care – '*its duty towards the rounded person ... the general welfare, safety and growing confidence of the child*' – was '*very highly valued*' (head of department).

In terms of the planning of the CCTs at whole-school level, in each year of Key Stage 3, the annual school questionnaire asked the 51 survey sample schools how the six CCTs had been covered in the curriculum that year. Table 8.1 below shows for Years 8, 9 and 10 how many of the survey sample schools indicated the methods by which they covered each of the CCTs: discrete provision or entirely through other subjects or both discrete provision and through other subjects. Some schools did not indicate how they addressed the CCTs.

Table 8.1   Schools' provision of the cross-curricular themes in Key Stage 3

CCTs	Discrete provision N			Other subjects N			Discrete provision and other subjects N			Not indicated N		
	Year 8	Year 9	Year 10	Year 8	Year 9	Year 10	Year 8	Year 9	Year 10	Year 8	Year 9	Year 10
IT	16	12	11	12	17	20	21	17	14	2	4	6
HE	5	3	3	35	39	36	7	4	6	4	4	6
CE	9	6	18	26	32	11	5	4	15	11	8	7
CH	0	1	0	43	43	44	3	1	1	5	5	6
EMU	1	0	0	43	42	42	3	2	3	4	6	6
EA	1	1	0	43	43	43	2	1	2	4	5	6

Source: *NIC Cohort Study: Year 8, 9 and 10 School Surveys*

The table shows some notable variations in schools' approaches to each of the CCTs. Throughout Key Stage 3, EMU, EA and CH were taught overwhelmingly through other subjects, very few schools making discrete provision for these CCTs, or covering them through discrete provision and other subjects. HE was primarily addressed across the curriculum, though it was more common for schools to provide discrete provision for this theme than for CH, EA and EMU. This was particularly true in Year 8, indicative perhaps of greater pastoral provision to help pupils settle during their first year of post-primary school. It is worth noting that, if CH and EA were taught separately, as well as across the curriculum, this happened in Year 8. There may be a suggestion here that the CCTs receive most attention in this year.

There was a marked change in schools' approaches to CE during Key Stage 3. In Years 8 and 9, most schools addressed it solely through other subjects. Both years, but especially in Year 8, a substantial minority of schools did not indicate how they covered CE, intimating perhaps that some did not consider this CCT particularly relevant in the early part of the Key Stage. In Year 10, however, provision of CE was much more extensive. Case-study work showed that this was in order to prepare pupils for choosing their options.

The table shows that, throughout Key Stage 3, discrete provision or a combination of discrete provision and coverage through other subjects was a common means by which to mediate IT. In Years 8 and 9, this type of mediation made IT distinct from the other CCTs that were most often covered through other subjects. However, it can be seen from the table that the number of schools providing IT as a discrete entity declined after Year 8. This was possibly because, having mediated IT separately in Year 8, schools felt pupils had acquired the basic computer skills.

8.4 CCTS as mediated

In their interviews, teachers described how they had covered the CCTs in their teaching of the case-study pupils. As previously stated, teachers from one school that gave the CCTs very high priority gave the most instances of CCT work. Teachers in a grammar school gave the fewest references. However, pupil interviews and the observations conducted in this school did show that there was at times, ambitious, if not frequent, coverage of the CCTs. For example, case-study pupils in this Protestant-managed school commented that they had done a project about the culture of Eire in home economics, and a history lesson was observed where pupils debated the arguments surrounding marching.

An analysis of teachers' comments on the mediation of CCTs revealed the different treatment of the CCTs, both within and across schools at post-primary level.

8.4.1 Information Technology as mediated

In three of the case-study schools, mediation of IT consisted of separate provision, as well as cross-curricular coverage. In the two remaining schools, IT was addressed through other subjects only. A third of the teachers interviewed had included some IT in their teaching of the cohort pupils. Most often, the aspect of IT which teachers reported covering was word processing. To a lesser degree, teachers had made use of the computer for information gathering (geography, science, careers education, PE – pupils used the computer to find out about sports classes and clubs in their local area); they had used computer art and design packages (art and technology), and spreadsheets and databases (maths, geography, French). IT was also addressed through the use of electronic equipment (calculators, keyboards) in maths and music.

However, with the exception of technology, where it was considered '*inherent*', teachers found incorporating this CCT into their subject problematic, with its inclusion largely regarded as an event, '*... taking them on a visit to the IT suite*' (French teacher). Although a third of teachers interviewed had used IT in their teaching of the cohort pupils, several commented that this was the only or one of only a small number of occasions when they would do so with this group: '*The second years are actually doing a bit of IT with this next project, two dimensional*

project ... we will only use it once now, this will be it for first, second and third year, will be this one spell and it's to do with lettering' (art teacher). Teachers highlighted difficulties in including IT in their teaching more often than for the other CCTs. The most frequently cited barrier was the lack of facilities: no computer in their classroom; a computer which was very old or incompatible with the school system; having only one computer in the room for a class of 20 or more pupils: *'Although we have a computer in the room, it's not really feasible for 20 pupils to be all learning from the one computer at the same time'* (home economics teacher); and having to book the IT suite: *'... if you go to book it, very often you find that you can't because someone else has it booked'* (French teacher). Secondly, teachers' own lack of confidence and competence deterred them from using computers with pupils: *'Really, I am ashamed to say I haven't used IT with them. I am lacking in confidence myself'* (French teacher); or when they did use them it meant that the activity was restricted to those aspects with which the teacher felt confident because *'you know how it is when ... there's 30 pupils there all pressing buttons'*. Lack of time was viewed as another hindrance, with teachers having to concentrate on covering the *'packed'* curriculum for their own subject. Equally, teachers raised how slow IT was in organisation: *'I know I should organise more often to go* [to the IT suite], *but it took me ten days to organise the second years' visit'* (English teacher) – and in process: *'From the experience of doing it over the last three years or four years, it can take up to a full week's work, or even into the second week, to get them to type up even half a dozen lines. So, it's extremely time-consuming'* (French teacher). Further, it was posited that there was no time for teachers to practise the skills they had learned during training courses or to familiarise themselves with IT programmes which they could then include in their teaching.

Interestingly, pupils' skills were also identified as a difficulty. The wide variation in pupils' skills, described as *'perhaps more noticeable than in some of the other subjects'*, rendered the use of the computer across the curriculum problematic, and hampered teaching in specific IT lessons. Pupils' competence on entry to post-primary school was said to be variable, with some pupils *'excellent'* and others *'frightened of computers ... scared stiff'*. This would corroborate findings from interviews conducted with the cohort pupils and their teachers in the final year of primary school. From these, it emerged that in none of the ten primaries did pupils receive regular formal sessions where computer skills were taught. It was also found that there was much variation in the provision that did exist in Year 7. Interestingly, perhaps, the range of pupils' computer competence was particularly raised as an issue at a post-primary school which included amongst its feeder primaries a school where case-study pupils had used computers regularly in Year 7 and another where they had very limited experience of IT. The variation in IT provision in Year 7, which was found largely to be determined by the class teachers' own aptitude and confidence with computers, would appear therefore to have a knock-on effect for IT education at post-primary level. Further, that an IT teacher at one post-primary school should describe pupils' skills as *'horrific'* may suggest that some Year 7 teachers overestimated pupils' ability when they suggested that their pupils' IT skills were superior to their own. An IT teacher at a post-primary school declared that pupils' experience with playing computer games did not equate to IT literacy.

8.4.2 Health Education as mediated

Home economics teachers made frequent reference to the inclusion of HE in their subject, one commenting that *'all my work'* related to HE. They related how pupils would prepare low-calorie healthy meals, as well as written work on healthy

eating and diet-rated disorders: '*We are trying to get the message across to this generation the importance of more exercise, eating less saturated fat ... and taking more fruit and veg because of the link with cancer.*' In addition, pupils did work on family relationships, and safety was an important feature of practical work. Indeed, most teachers of subjects with practical elements (technology, PE, art, science) commented that HE was incorporated into their subjects through the need to reinforce safe working practices. Work done in PE on hygiene and exercising was also cited: '*They would also get the health education very much through PE. I suppose most important would be the hygiene aspect of it, plus the importance of doing exercises.*' In maths, it was said that HE was covered though work on data handling which looked at health statistics. Environmental awareness is part of the objectives for HE, but this aspect was seldom mentioned. It only featured in the accounts of two interviewees, a languages and a geography teacher in the same school.

8.4.3 Careers Education as mediated

Coverage of CE, either as a separate provision or through subjects, was very limited in Years 8 and 9. However, in Year 10 it became a feature of the curriculum, though the nature of this was found to vary considerably between the case-study schools: a year of once-weekly single lessons from careers staff (two schools); a module in the pastoral programme (eight periods taken by form teachers in one school and 12 periods taken by careers staff in another school); two lessons taken by the careers coordinator (one school). (It was acknowledged in the latter school that the current Year 10 had not received adequate CE and for the following Year 10, a module was to be included in the pastoral programme.) Individual careers interviews for pupils, inputs from external careers specialists and options events to which parents were invited were also features of provision.

CE emerged as the least cross-curricular of all the CCTs. Only 16 of the teachers interviewed commented that they had referred to CE in their teaching of the cohort pupils, and a number of these teachers cited the difficulty of including CE. Indeed, there was acknowledgement from careers coordinators that although CE's status as a CCT was '*very valuable*', it was not comprehensively covered across the curriculum.

Modern languages (mainly through work on the vocabulary for occupations in the target language), art and geography teachers were most likely to have included CE. In several instances, CE consisted of reference to the general vocational relevance of the subject, or types of occupations specifically related to the subject. A small number of teachers commented that they raised pupils' awareness of the expectations of the working world. Some teachers had incorporated into their schemes of work topics that covered CE: one interviewee described how in geography in Year 9 pupils in his school did a unit of work about local industry and careers opportunities in the vicinity.

8.4.4 Cultural Heritage as mediated

CH was cited most often when teachers were asked which of the CCTs they had addressed in their teaching of the cohort pupils. Principally, teachers of modern languages, music, history, art, English, RE and maths reported having incorporated this CCT into their teaching, as did home economics and PE teachers. CH appeared very much founded in these subjects, as consistently across the schools, teachers in these subjects commented on their coverage of this CCT.

Modern language teachers' coverage of this CCT consisted of introducing pupils to the way of life and customs of the country, '*trying to help them understand how other people live*' (meal times, celebrations, street life, history) (Spanish teacher); and explaining its demography and raising their awareness of other French/Spanish speaking countries, '*where the language is spoken, that is a real eye-opener for them because they never realised so many countries spoke French*' (French teacher). For Irish teachers, translations of pupils' names into Irish, place-names and songs contributed to their coverage of CH. In history, teachers commented that they addressed this theme when they taught Irish history and also through work on the people in the time under study, especially the cultural effects of their actions: '*Obviously with the Normans coming over, it does change culture to a certain extent. ... We talk about the Normans bringing new words to the English language, a new sense of dress and obviously the feudal system changing culture.*' Coverage of this CCT in maths involved the study of great mathematicians like Pythagoras and consideration of imperial measurements: '*We have discussed where inches came from, part of your finger.*' Art, music, and English teachers addressed this theme by introducing pupils to the work of various artists, musicians and writers, and to the art, music and texts of different countries and eras. In home economics, CH was part of work on food from Irish and different cultures and the traditional dishes associated with festivals like Christmas, Easter and Hallowe'en. In PE, pupils learnt national dances, and in three schools, children also played Gaelic football. In RE, CH was covered through consideration of the backgrounds of pupils' own and different religions, and lifestyles during the times under study (for example, the Early Church and the Reformation).

8.4.5 Education for Mutual Understanding as mediated

Mediation of EMU involved several strands. Almost half of the teachers interviewed reported that they had incorporated EMU into their teaching. History, RE, English and drama teachers most frequently referred to having addressed EMU, then modern language teachers and teachers of practical subjects, especially home economics, PE and music. Maths, science and geography teachers were far less inclined to mention covering this CCT.

From teachers' accounts, it was clear that EMU was mediated by various means.

- EMU through empathy: mainly cited by drama, RE and history teachers: '*... trying to understand another point of view ... that would bring in education for mutual understanding ... to understand the difficulties of a conquered race – the Saxons, and the difficulties of the conquering race – the Normans.*'

- EMU through working together: teachers of practical subjects described how pupils' cooperating and working together in their subjects contributed to the coverage of EMU: '*PE would have a lot of cross-curricular themes in it. EMU would be one of the major ones and it's all to do with cooperation, working in teams and working with others*' (PE teacher).

- EMU through subject content: examples given were work on friendship in PSE, and reflecting the overlap of CH and EMU in the curriculum as specified, work on the music, food and lifestyles of other countries was also highlighted as EMU.

- EMU through cross-community events: PE teachers stated that EMU was mediated through cross-community matches and tournaments in their subject. The case-study schools also had links with schools of different religious

denominations, though in two schools (both grammars) joint activities did not involve the cohort pupils, only GCSE and A-level pupils.

- EMU through the values emphasised in the classroom: when teachers were asked to describe the values they emphasised in their classroom, more than half of the sample reported promoting values concerned with respect for oneself, others and property, respect for the views of others and cooperation. The success of this as a means of communicating EMU was in question, however. When teachers were asked to speculate on the values which their pupils would associate with them, most often they referred to work and discipline: handing in homework, working hard, listening, good behaviour.

8.4.6 Economic Awareness as mediated

EA was taught as a CCT, though fewer teachers commented on having incorporated this into their lessons than they did CH, EMU, IT and HE. In one school in Year 10, economics was taught for approximately a term. Teachers of maths, geography and home economics made frequent reference to the inclusion of EA in their subjects. In maths, through which EA was deemed 'very easily delivered', reference to it included work on VAT, currency exchange rates and the posing of questions in an economic context. All home economics teachers interviewed had included EA, two stating that the Programme of Study for home economics covered EA objectives:

> The home economics in Key Stage 3 covers the home and family issues, and in that, it would take in resources and management of resources – that would be, say, handling money, consumerism, being aware of advertising, the influence of advertising on their choice of products and commodities (home economics teacher).

Geography was also a subject where 'you are going to bring in economic awareness', with mention made of how EA had been part of work on farming, transport and types of industry. As practical subjects made a distinct contribution to EMU through pupils' ways of working in these subjects, so they did with EA, as teachers of PE, art, technology and home economics commented that they addressed this CCT through reference to the cost of resources and equipment. As with the other CCTs, modern language teachers frequently mentioned their coverage of EA through their work on the vocabulary for economic-related activities – shopping, money, travel and tourism. They also explained that they would bring in French francs for pupils to compare French and UK prices and make reference to industries that were important in their countries of the target language.

8.5 CCTS as experienced and internalised

8.5.1 Information Technology as experienced and internalised

IT as experienced

In each annual pupil questionnaire, respondents who had done IT as a separate subject that year were asked to complete a set of semantic differentials. An initial finding to report is the decrease in the number of pupils who completed this item as Key Stage 3 progressed: 2,215 pupils in Year 8, 1,528 in Year 9 and 1,367 in

Year 10. Reflecting the findings of the school management questionnaire, this shows that each year, fewer pupils experienced IT as a separate subject.

Pupils' dissatisfaction with IT provision

Pupils' responses clearly showed their dissatisfaction with the provision of IT they received throughout Key Stage 3. Each year they regarded the amount of IT they experienced as insufficient: in Years 9 and 10 it emerged, jointly with PE, as the subject which pupils felt they had not done enough of, and in Year 8, only the amount of PE was considered more lacking. Equally, throughout Key Stage 3, IT was a subject where pupils felt comparatively underworked in lessons. In both Years 8 and 9, it was the subject where pupils felt most underworked, and in Year 10, pupils only felt more underworked in careers education. Likewise, in terms of the amount of homework given, each year, it was the subject, after PE, for which they believed they received comparatively little homework. Further, IT was regarded as an easy subject, particularly in Years 8 and 9 where it was judged the second easiest. In Year 10, IT was still regarded as the fifth easiest subject, but the shift in its ranking would suggest that, in comparison with other subjects, it was considered slightly more difficult this year. Interestingly, though, the increased difficulty of IT did not affect pupils' opinion on the lack of provision they had experienced or their 'busyness' in lessons; their views on these issues remained constant throughout Key Stage 3.

It emerged that no one pupil type or school type had consistently, every year, felt most strongly about the views recorded above. Possibly, this suggests that overall in Key Stage 3 the lack of IT, both in timetable allocation and homework, and pupils' sense of being underworked in class, were felt across the board. In certain years, however, grammar school pupils, high attainers and boys did feel particularly dissatisfied with IT. In Year 8, pupils from grammar schools were notably more inclined than their secondary school peers to feel they had not done enough IT or sufficient homework, and to have found the work easier. In Year 9, the type of school pupils attended made no apparent difference to pupils' views on these items. However, in Year 10, respondents from grammar schools again felt more strongly that they had not done enough IT, though secondary school pupils were more likely to feel they had received insufficient homework. Probably linked to the results for grammar schools, in Year 8, high-attaining pupils were more likely than their mid- and low-attaining counterparts to believe that they had done little IT. Throughout Key Stage 3, boys consistently judged IT easier than girls, and in Year 9 were more inclined than girls to think they had not done enough and to feel underworked in IT lessons.

The above findings, which relay the views of pupils who had done IT as a separate subject, suggest that a NIC designed and mediated from the pupils' perspective would include greater coverage of IT in Key Stage 3. In interviews, the case-study pupils who had done IT as a separate subject also believed this provision had been insufficient. In each year of Key Stage 3, these pupils stressed their desire for more IT lessons. Typically, they had one single period of IT per week. They did not consider this sufficient, and thought two or three periods a week would be more appropriate: *'For English, we get six* [periods a week] *and for IT we get one. If you compare that, why couldn't you have five English and maybe two IT or something?'* (male, Year 8). Interestingly, though, when in one school, pupils did get a double IT lesson each week in Year 10 after having only a weekly single lesson in Years 8 and 9, they still did not think this was sufficient. Their enjoyment and general interest in computers, as well as the importance of IT for jobs, were the reasons given by pupils as to why they should have more IT lessons.

In addition, some believed it would help them make better progress: with only one short weekly lesson, it could be difficult to remember what they were doing from week to week:

One period a week is very little, and you find by the time the week has gone by and you come back after the weekend, you have forgotten most of it and you have to take a wee while to get back into it, and once you have got back into it, the period has ended (male, Year 8).

Given that these pupils felt that the provision they received was insufficient, the opinions of those who experienced IT only as a CCT would be interesting to consider. In the case-study sample, pupils from two schools did not have IT as a separate subject at all during Key Stage 3. In each year, interviewees in these schools commented that they wished they had done more IT. Compared with their counterparts in the other case-study schools, these pupils tended to be more modest in their requests for greater coverage of IT. Probably reflecting the fact that their only school experience of IT was as a CCT, several registered that they would like to do more IT through their subjects: '*I think they should bring using computers more into English or even languages sometimes*' (male, Year 10). Another pupil simply felt she would like '*another chance*' to revise some of the desktop publishing skills she had learnt in English. One girl, however, in spite of a rather narrow view of IT, expressed a strong preference for separate provision: '*I think we should have a separate class for computers, because it's very useful for people to be able to type*' (female, Year 9).

It would seem, therefore, that whatever IT provision they received – either as a separate subject or cross-curricular provision – it was not regarded as sufficient by pupils. It might be noteworthy that it was particularly in Year 10 when case-study pupils commented they wished they had done more for IT. This is possibly linked to the fact that, from pupils' comments, there appeared to be fewer instances of cross-curricular coverage of IT in Year 10. Also and very specific to one school, pupils in one of the schools no longer had IT as a separate subject in Year 10, as they had done in Years 8 and 9, prompting several to call for greater IT provision that year. In addition, the proximity of Key Stage 4 and the approach of GCSEs made some pupils more aware of the lack of provision. For example, one boy from a school where IT was not taught as a separate subject wished more subjects had incorporated use of the computer during Year 10 because it would have helped prepare him for GCSE IT. He also felt this would have been beneficial for pupils who were not taking an IT-related course in Key Stage 4, because '*they might not get a chance to work a computer at all*' (male, Year 10).

Variation in IT provision

The above discussion has alluded to another important finding to emerge from this project. Evidence collected from the case-study schools showed clearly that pupils' experience of IT, both at Key Stage 3 and in Year 7, varied considerably depending on the school they attended. At post-primary level, in three of five schools there was a timetabled IT lesson, but in two schools (both Catholic-managed) case-study pupils' only experience of IT was as a CCT. In one of the schools, it appeared that IT provision had been especially limited.

- Year 8: none of the pupils asked could recall having used the computer in their subjects.

- Year 9: in English pupils learned word processing skills for six weeks: '*instead of double English on a Monday morning, we had double computers and IT*'

(female). They looked at spreadsheets in maths, and also spent one lesson using a careers computer programme, though this was not part of a planned piece of work – '*it was just something we did*' (female).

- Year 10: provision was again limited – one girl remembered having used the computer three times during the year: '... *half an hour twice in careers, and an hour in biology, and that's it really*'. Two other classmates could recall using the computer in technology.

The case-study pupils from this school had attended primary schools where in Year 7 their teachers were amongst those in the sample who had taught the least IT. Therefore, from their last year of post-primary school to the end of Key Stage 3, these 12 sample pupils received a very meagre diet of IT. Additionally, because only two of these 12 had elected to take GCSE IT, it might be speculated that for ten of the pupils, their experience of IT from Year 7 to the end of compulsory schooling would be scant. Perhaps unsurprisingly, one boy from this school sounded desperate in his desire for IT, and echoed his peers when he gave the computer room almost mythical status: '*We have never really went up to them and done anything with them. We have done one thing in English on it, but we haven't done much of that. You don't know what you want to do, you just want to go up and see it*' (male, Year 10).

Chapter 2 has shown that there were differences between survey sample schools in terms of the time they allocated to the subjects of the NIC. The variation in pupils' experience of IT depending on the school they attend does appear particularly marked, however. In the case-study sample of five schools, pupils' experience ranged from a weekly lesson of IT throughout Key Stage 3, as well as cross-curricular provision, to little more than six hours of word processing. It would appear that its status as a CCT does mean that some pupils receive very little IT education.

IT across the curriculum

At this point, it is worth discussing how IT operated as a CCT in all the case-study schools. Each school taught IT across the curriculum (in three schools, of course, this was in addition to discrete provision). From the youngsters' comments, there was evidence that the cross-curricular teaching of IT meant that they used the computer for different purposes in their various subjects, and through this they saw its multifarious functions: particularly word processing, but also finding information, spreadsheets, graphs and databases, and the Internet. For example, pupils from one school recalled how, over two terms in Year 8, they used the computer in technology for '*drawing out our designs for the key fob and our note holders*', in English to '*type out stuff*' and to access information from the Internet for project work, in French for word processing, and in maths for '*doing graphs*'.

However, the cross-curricular appearances of IT tended to be spasmodic and fleeting. Typically, pupils gave the impression that the computer had a cameo role in their subjects: '*Once we have done science with a computer*' (male, Year 8); '[In] *French, once, for typing out a letter*' (male, Year 9); '*A bit in HE when we were designing posters, but not much*' (female, Year 9). Pupils gave fewer examples of the sustained use of the computer in their subjects. At best, they would use IT in a particular topic over a number of lessons or weeks. Technology, and in one school, maths, were the only subjects which involved regular, '*once a month*', use of the computer. Further, the amount of cross-curricular coverage pupils cited did vary from term to term, year to year and school to school. In Year 10 particularly, pupils from each of the case-study schools recalled less cross-curricular provision; in one (grammar) school, none of the pupils asked remembered using IT in their

subjects (perhaps because in this year pupils had a weekly double period of IT, i.e. discrete provision).

Pupils did value the opportunities they had to use the computer in other subjects. They conveyed how using a computer in a lesson could enhance the subject and their learning. One girl, for example, had appreciated the opportunity to use a CD-ROM programme which showed seed dispersal: *'In science you just don't want to be sitting in the science lab every time, but if you are on the computers you can get to see all the things'* (female, Year 8). Another pupil in her class, however, had been less convinced: *'It's just like doing science but with a computer'* (male, Year 8). For pupils who also had IT lessons (provision which they did not regard as sufficient), cross-curricular coverage of IT gave them another opportunity to use the computer: *'IT, you only get one period a week, so then when you go to the other subjects, then you get another chance of using the computers'* (female, Year 9). In addition, they were able to use the computer for different purposes – *'you can go into different games'* – whereas in IT lessons *'really, all you're doing is typing'* (female, Year 8).

Difficulties with the cross-curricular coverage of IT were raised too, however, especially problems with finishing work: *'IT come up once or twice with English when we were doing a letter out, but I never got mine finished on to disk'* (male, Year 8). In addition, there was some doubt whether using computers in other subjects facilitated the acquisition of IT skills: *'It's good for doing the work, but we don't learn anything'* (male, Year 10). One boy recounted his difficulty and sense of frustration when he had had to use the computer in geography to draw graphs, pie charts and spreadsheets for a project:

> *... you never got that much time to use it and look at things, look where you were going; it just said on your sheet 'Do this, do that, do this', and you never even got time to look at it and memorise it how to do it yourself ... and then you couldn't do it when you went home* (male, Year 9).

This boy felt that with regard to IT, *'you learn more in an IT lesson than you do in three lessons of geography'* (male, Year 9).

The results on IT have revealed that throughout Key Stage 3 no pupil, no matter how they experienced it – separate subject or through subjects – was satisfied with the amount of IT they received. It has also been shown that the extent of provision varied between schools, and that some pupils who experienced IT only as a CCT received minimal provision. The difficulty, however, for curriculum designers and schools would be how to remedy this. An obvious answer might be to change the status of IT to that of a subject in the NIC and perhaps to stipulate that it be taught separately for a recommended length of time. If this was to be the case, it would have to be borne in mind that the findings also suggested a need to reconsider the mediation of IT when it is taught as a separate subject. The results showed that pupils, regardless of type of school, ability or gender, felt consistently underworked in IT lessons. Moreover, a number of pupils who had done IT as a separate subject expressed dissatisfaction with their lessons: *'... the way it's taught is not very fun'* (female, Year 9). A girl in Year 8 relayed that in her class there were pupils who were *au fait* with computers and those with no experience, and because the whole class did the same work in IT lessons, for those pupils who were already computer literate, *'it's just like playing really'*. She had found IT in Year 8 *'awful'*, because the teacher had to stop and explain the work many times for *'the slow people. At the beginning, she was telling us how to turn on the computers. Like for me, I would think "Who doesn't know how to turn a computer on?", just press two buttons basically. It gets a bit annoying'* (female, Year 8).

Therefore, in addition to considering pupils' views on the amount of IT they experienced, there may also be a need for curriculum designers and schools to consider how IT could be better mediated, especially to meet the needs of all abilities. However, if any change was made to the standing of IT in the NIC, it might also be worth keeping its cross-curricular status as well. Although appearances of IT in other subjects were brief and episodic, they did give pupils experience of a range of computer programmes in different settings, opportunities that were largely appreciated by youngsters.

IT as internalised

Results from the pupil questionnaires showed that each year IT was rated highly by pupils in terms of enjoyment, progress made and its importance for a job or career and for their present-day and adult lives. Considered next to the findings for pupils' experience of IT, these results would suggest that throughout Key Stage 3, provision of IT did not reflect pupils' enjoyment and the importance they attached to it. That the same trend is evident in each year of the study is perhaps indicative of the certainty of pupils' feeling on this. From the pupils' perspective, in Years 8, 9 and 10, there was a mismatch between their interest in IT and its coverage in the NIC.

Each year, IT emerged as the second most enjoyable subject after PE. Further, each year it was one of two subjects in which pupils felt they had made most progress. Each year IT was deemed the third most important subject, after English and maths for a job or career. And, whilst it was always regard highly, over the course of Key Stage 3, pupils grew more convinced of its importance for their adult and their present day lives. A notable increase in its mean score showed that they considered IT to be more important for adult life in Year 10 than they had done in Year 8 or Year 9. Meanwhile, in Year 8, IT was deemed the fifth most useful subject for their present day lives, in Year 9 the third, and in Year 10 the second. The case-study data showed that by Year 10 several pupils were using the Internet to help them with their homework, and it may be that this boosted their estimation of the usefulness of IT in their current lives.

The type of school pupils attended generally made no difference to their view on the value of IT or their enjoyment of it (though in Year 9 secondary school pupils enjoyed IT more than their grammar school counterparts). Perhaps linked to the overall increase in the importance pupils attached to IT, early differences in girls' and boys' perceptions of its usefulness did not persist throughout Key Stage 3. In Year 8, boys were conspicuously more likely than girls to consider IT as important for adult life and important for a job and career; however, in Years 9 and 10 both genders agreed on IT's usefulness for these.

That said, in terms of the effect of pupils' gender on their perception of IT, there was intimation that boys regarded it more highly. Generally, there was no or very little difference between boys' and girls' views on IT. However, at some point during Key Stage 3, boys did rate IT more positively than girls in terms of enjoyment (Year 10), its importance for adult life (Year 8), for a job and career (Year 8), and for personal development (Year 9). Equally, they consistently found IT easier than girls, and in Year 9 were more inclined to think they had not done enough and to feel underworked in class. Related to this, there was a sense that the gender of the school pupils attended may have some impact on their opinion of IT. Here, only findings from Years 8 and 9 can be taken into account because the numbers of pupils from single-sex boys' schools (45) completing the semantic differential item for IT in Year 10 were too low to make meaningful comparison. Nevertheless, in Years 8 and 9, respondents from single-sex girls' schools tended

to be more negative than their counterparts in mixed and single-sex boys' schools. Both years, pupils from single-sex girls' schools found IT slightly harder and enjoyed it a little less. Further, especially in Year 9, they judged IT to be less important for their adult lives and less helpful in their personal development than did their peers at mixed and single-sex boys' schools.

In interviews, pupils also conveyed their enjoyment of IT and the importance they attached to it. Throughout Key Stage 3 and also in Year 7, the vast majority of pupils had found the IT work they had done '*fun*', often for no greater reason than '*I just like working with computers*', giving a sense that youngsters had an almost innate enthusiasm for and interest in IT. Each year a few pupils did comment that they had enjoyed IT "*cos you do nothing*' (male, Year 8) or because '*it's easy*' (female, Year 8). Given the recurring findings that respondents found IT easy and felt comparatively underworked in lessons, there may be little doubt that for some, this easy work and pace did contribute to their enjoyment. Particularly voiced in relation to the cross-curricular use of IT, a number of pupils were emphatic that using the computer in lessons was '*definitely better than writing*' (female, Year 10).

In Year 7 and throughout Key Stage 3, when the case-study pupils were asked whether the IT work they had done had been valuable, the vast majority of pupils confirmed it had been, and overwhelmingly referred to its importance for a job or career. There was some advance in pupils' perceptions of this, however. In Years 7 and 8, a number of pupils of all abilities took a very literal view of IT's vocational relevance, believing that it would be useful for a handful of specific professions: '*... once you're older you might have to be on the computer for a job, typing things or be a hotel manager*' (male, Year 7); '*... if you were going to be an IT teacher ... and if you were doing accounting jobs or anything like that, with a bank*' (female, Year 8). These types of comments were less prevalent in Years 9 and 10, though a solid few, mostly lower-attaining pupils, did continue to relate the vocational value of IT to office and accountancy jobs. The view expressed only by the highest-attaining pupils in Year 7 that computers were important for '*quite a lot of jobs*' became much more common from Year 8 onwards:

> *It seems everything is run by computers nowadays, and by the time when we are getting jobs of whatever, it's probably going to be very valuable to have that* (female, Year 9).

> *When you go to the majority of jobs, it's 'How many words a minute?' 'Can you work the computer?' ... 'Can you do spreadsheets?'* (male, Year 10).

Each year in Key Stage 3, a few pupils added that IT was valuable in helping them with their schoolwork and homework, especially for researching and presenting projects. And, referring to the use of computers in other subjects, it was also acknowledged that '*it helps you to learn quicker*' (female, Year 9).

There were further differences between pupils' theories on the value of IT in Year 7 and Key Stage 3. In Year 7, the pupils had found IT valuable for the opportunity it gave them to learn about computers: '*It helped me to learn a bit more about computers and how to use them*' (female, Year 7). Perhaps because they had gleaned this knowledge in primary school, this was cited less frequently in Key Stage 3, although for those pupils who did not have computers at home, it was still important: '*It is getting you used to computers because I don't have one myself*' (male, Year 8).

8.5.2 Health Education as experienced and internalised

Health Education as experienced

In the annual pupil questionnaire, those respondents who had done HE as a separate subject were asked to complete a semantic differential item for this 'subject'. An important initial finding was the low number of respondents for this item, 290 in Year 8, 557 in Year 9 and 190 in Year 10 in samples of over 2,500. This would indicate that most pupils did not experience HE as a separate subject.

A very similar pattern emerged in pupils' responses to HE as was evident in relation to IT. In each year of Key Stage 3, it was a subject which pupils found easy – the third easiest subject in Years 8 and 9, and the second easiest in Year 10 – and where they felt underworked in class. Further, it was a subject for which pupils believed they had comparatively little homework (they only felt more strongly about the insufficient amount of homework in PE and IT in Years 8 and 9, and in PE in Year 10). These findings would indicate that HE, taught as a separate subject in Key Stage 3, was easy in the level and pace of work, and lacking in the amount of homework.

In terms of the amount of HE they received, as they progressed through Key Stage 3, pupils grew more concerned about the extent of the provision: the mean scores for this item advanced towards the 'too little' end of the scale each year. Grammar school pupils in particular thought the time allocated to HE was insufficient. Each year they were more inclined than their secondary school counterparts to believe that they had not done enough HE. That said, however, it should be noted that as Key Stage 3 progressed, secondary school pupils did become more convinced that too little time was spent on this.

These are the views of pupils who had HE as a separate subject, but, as previously highlighted, most cohort pupils did not experience HE this way. A question to the entire sample in each annual pupil questionnaire did, however, reveal a general feeling in favour of more HE. Asked to identify any topics that they felt had not been sufficiently addressed in the curriculum, health education issues (e.g. drugs and sex education, and first aid) were high on respondents' list of their unmet needs and priorities each year.

None of the pupils in the case-study schools experienced HE as a separate subject. However, each year virtually all the pupils asked recalled having covered health education issues through their subjects. As was the case in Year 7, HE was a CCT which pupils found easy to identify, particularly compared with CH, EMU and EA. From pupils' accounts of their experience of HE, it appeared to have a hybrid existence amongst the CCTs. Quite similar to EA, HE was firmly embedded in two subjects: each year nearly all pupils reported that they had covered aspects of HE through home economics, and several stated that it had been addressed through science. In addition to this, more like IT and CE, HE was very nearly a separate subject: youngsters from each school had covered HE through PSE (or its equivalent) and from their descriptions, it appeared that PSE was almost HE by another name. Finally, like EMU, pupils in one school also experienced HE through whole-school events like 'Environmental Week'.

From pupils' accounts, it appeared that there was some repetition in their experience of HE. Each year almost all respondents said that they had done healthy eating; however, there appeared to be little difference in what this entailed from year to year. Work on alcohol, smoking and drugs were other aspects of HE often cited

by interviewees, and the importance of PSE was evident here, as the vast majority of pupils had done these aspects of HE through this subject.

Science was often stated as a subject through which pupils had experienced HE. However, two Year 10 boys from different schools did acknowledge the limitations and difficulties of addressing HE through this subject. One boy described how sex education taught through biology had taken only 'a biological view', and had not made reference to the attendant emotions and relationships. The other boy had found that health education issues were difficult to learn through science: in work on the dangers of smoking in biology, for example: '... *you tend to learn very difficult stuff, like, if it says you shouldn't smoke – it will block your heart – it shows you why and there's a big diagram with a heart and all these different things labelled and all on it, so it seems more difficult to learn in biology*' (male, Year 10). In discussing his school's approach to HE, this boy conveyed how he would prefer work on HE to be taught in a lesson labelled as such; covering health-related topics in science or tutorial could be distracting:

Interviewee: *I think health education is important and I think that they* [the school]
do cover it, but maybe even if they had a class, instead of tutorial, they had like a health sort of class, something like that. ... You learn more if it's a class called what you are meant to be learning, you know – if you are in physics, you learn physics. It doesn't seem right in tutorial learning about health, and in biology health. You think it will be science-related or school-related. So, I think that they could improve it by ...

Interviewer: *Giving it a name?*

Interviewee: *Yes* (male, Year 10).

This issue of labelling the CCTs will be explored further in the discussion on CH.

Health Education as internalised

As was the case with IT, results from the annual pupil questionnaire revealed a discrepancy between pupils' internalisation of HE and their experience of it. In each year of the questionnaire, HE was perceived to be the subject that made the greatest impact on pupils' personal development. It was highly regarded for its usefulness for their present day lives, emerging as the third most useful subject in Years 8 and 9, and second most useful in Year 10. Also, it was one of the subjects where they felt they had made most progress. Yet to recall these pupils' views of their experience of HE: they considered the level and pace of the work easy, and felt they received comparatively little homework. And, as they progressed through Key Stage 3, they grew more concerned that insufficient time was allocated to it. It would therefore appear that the value which pupils attached to HE was not reflected in its status in the NIC or in schools' provision.

Throughout the study, pupils' views remained constant on the importance of HE for their personal development and their current lives. However, there was a notable decline in Year 10 in their perception of its importance for a job or career compared with their views in Year 8 and Year 9. It is possible that this was the result of their experience of CE in Year 10, through which they may have gained a better understanding of the subjects valued in the job market. Further, by Year 10, pupils were becoming less convinced about the importance of HE for their adult lives: it was the fourth most important subject for this in Years 8 and 9 but in Year 10 it had slipped and was the sixth most important. There may be an issue

here in that pupils felt HE had less relevance for their adult lives than it did for their present-day lives, for which it consistently emerged as one of the three most useful subjects. To remedy this, there might be a need for schools and curriculum designers to broaden the scope of what is covered in HE or to emphasise more how it relates to adulthood.

As Key Stage 3 progressed, there was a most marked increase in the extent to which pupils' gender impacted on their perception of health education. By Year 10, compared with boys, girls were appreciably more positive in their attitude towards HE. As summarised below, an increase in the value that girls attached to this CCT was not matched by a similar upturn in boys' perceptions:

- In Year 8, there were only three items where there was any notable difference in boys' and girls' responses: boys enjoyed HE more, whilst girls regarded it as more of a female-oriented subject and thought that it was more important for adult life.

- In Year 9, girls were again more inclined than boys to deem HE to be important for adult life, and in addition, they also regarded it as more important for a job or career, more useful for their current lives, more helpful for their personal development, felt they had made more progress and found it easier and more enjoyable.

- In Year 10, girls rated health education more highly than boys on the same items as in Year 9. However, on all these items, apart from on importance for adult life and impact on pupils' personal development, the differences in girls' and boys' mean scores were greater in Year 10, than they had been in Year 9. (Additionally, in terms of their experience of HE, Year 10 girls were more likely than boys to view HE as a subject which they had not done enough of, and for which they received insufficient homework.)

These findings would suggest a need for curriculum designers/schools to re-evaluate the content and mediation of HE in order to ensure that it is equally appealing to both genders.

The impact of the type of school on pupils' perceptions of HE altered over the course of Key Stage 3. Whilst there was no change in secondary school pupils' enjoyment of HE, their grammar school peers' enthusiasm decreased over the three years. They enjoyed it notably more in Year 8 than they did in Year 10. This was also reflected in the views of high attainers, who had enjoyed HE markedly more than mid- and low-attaining pupils in Year 8; yet in Years 9 and 10, they enjoyed it less than their comparative groups. The case-study data highlighted some repetition in the work covered in HE during Key Stage 3; high-attaining pupils may have found this less stimulating and therefore less enjoyable. The impact of HE on grammar school pupils' personal development also declined over the three years. Again, no such change was apparent in the views of their secondary school counterparts. A final finding to emerge perhaps highlights a difference in grammar and secondary school pupils' learning of HE: as Key Stage 3 progressed, grammar school pupils, compared with secondary, increasingly saw HE as being more important for their adult lives, whilst each year, secondary school pupils (and lower attainers) believed HE had greater vocational relevance.

In interviews, pupils in the case-study schools reported that work they had done in HE impacted on their behaviour in encouraging them to eat healthily and discouraging them from experimenting with drugs, alcohol or smoking. One girl,

for example, described how her eating habits had changed as a result of what she had learnt about at school: '*We learnt how many spoons of sugar is in a can of Coke – eight! And in Diet Coke there's none. It's only sweetener. So, I have started drinking Diet Coke instead, and there's just as much in a Mars Bar, so I don't eat them*' (girl, Year 10).

Both boys and girls expressed these views. However, the case-study data did provide a little illumination as to why boys became less enthusiastic about HE. By Year 10, pupils, especially boys, in the case-study schools were starting to comment that they had done enough HE because they had already learned all about healthy eating, drugs and smoking: '*Most of the stuff about drugs and all, you really know mostly about it, like. You know you are not to take drugs or take alcohol. You really knew the basics, like. ... You feel as though you have done it*' (boy, Year 10).

8.5.3 Careers Education as experienced and internalised

Careers Education as experienced

In Year 10, to reflect its presence in schools' curricula, a set of semantic differentials for CE was included in the pupil questionnaire. Respondents who had done CE as a separate subject completed this item.

A similar pattern emerged in pupils' responses to CE as it had done for IT and HE: their experience of this CCT was as an easy subject for which they were underworked in class, given comparatively little homework, and for which they would like to have seen greater coverage. Pupils found the CE they had done during Year 10 easy. It was deemed the second easiest subject they had done in Year 10 (after PE and joint with HE and drama). It was the subject where they felt most underworked in class. From the case-study pupils' accounts, a considerable part of CE in Year 10 involved pupils' assessing their own skills and abilities and learning about decision making, option structures and job opportunities; therefore, perhaps, the easy work and relaxed pace of the class were appropriate for this. Indeed, an interviewee did describe CE as '*just really a discussion class*' (female, Year 10). Pupils did have concerns about the extent of the provision they received, however, deeming CE to be one of the subjects (after IT, PE and drama) which they would like to have done more of and a subject for which they received insufficient homework.

When the results for CE were broken down by the variables, it emerged that gender of pupil and the type of school made a conspicuous difference to their perceptions of the CE provision they had received. Most notably, girls were markedly more inclined than boys to feel they had not done sufficient CE or enough homework for it.

Grammar school pupils were conspicuously more likely than their secondary school counterparts to feel that they had not done enough CE, and also to find the work they had done easier. This would suggest a need for greater coverage of CE in grammar schools and perhaps also a need to make the work more intellectually challenging.

In interviews, the case-study pupils gave their accounts of their experience of CE during Key Stage 3. In line with teacher accounts, pupils recalled virtually no CE provision in Years 8 and 9. A couple of instances were recounted when mention had been made in home economics of '*what you think you're going to be doing*

when you're older' (female, Year 8), and a unit in geography on primary, secondary and tertiary industry was cited by pupils in one school in Year 8 and another in Year 9. When asked in Year 9, most interviewees believed they should wait until Year 10 before embarking upon CE: *'I think I am too young'* (female). Only one pupil saw any advantage in beginning CE then: *'It would help us when we have to decide what jobs we are looking for, so if we started it this year then we would have more information about that particular job'* (female).

In Year 10, all pupils asked indicated that they had received CE, and as teachers' comments had also revealed, the extent of this varied considerably depending upon the school they attended: a year of once weekly single lessons from careers staff (two schools); a module in the pastoral programme (eight periods taken by form teachers in one school and 12 periods taken by careers staff in another school); two lessons taken by the careers coordinator (one school).

From pupils' accounts, it emerged that CE in Year 10 (unsurprisingly) focused upon choosing options for Key Stage 4, the qualifications needed for different occupations and investigations by pupils into the types of careers they found appealing (often through the use of IT programmes). It was clear that the depth and manner in which pupils covered this content varied between schools, no doubt as a result of the differences in the amount of time allotted to CE. In the two schools with the least extensive coverage, pupils' descriptions implied that their experience of CE had been receiving information about options and the qualifications required for jobs:

> *Two classes of careers, she told us about our options and what we want to be when we grow up and stuff, that's it, like* (female, Year 10).

> *There was a bit on subject choices, just basically explaining, saying why would you want to take a subject* (male, Year 10).

In schools giving more time to this CCT, there was intimation in pupils' comments that through CE they learned not only the knowledge, but also the skills to help them to choose their options and future careers. For example, in one school where there was a weekly CE lesson throughout Year 10, pupils described how they had learnt '*... about yourself ... what you like and what you would like to do'*; '*... why we need subjects for our career when we are older'*; '*... how to choose our subjects usefully, choosing them wisely'* (females, Year 10).

For the most part, the content pupils experienced appeared very much connected with themselves and their own futures – what GCSEs to take, which occupation they would like to do. Pupils in one school, however, also relayed how they had learnt about the world of work at large: *'We have just done about different businesses and how businesses are run, and the jobs of managers and stuff and how it would be harder than just a job from nine to five'* (female, Year 10).

From pupils' accounts, again confirming the teacher findings, there were very few references to CE in other subjects in Year 10. Indeed, the extent of the cross-curricular coverage of CE belied its status as a CCT:

- PSE was the only subject in which pupils recalled having covered CE to any great extent. In two schools, this was because provision of CE in Year 10 took the form of a module in PSE. In one school, though, pupils described how in addition to their weekly CE lesson, work in their PSE class addressed CE from a different angle.

- Regarding coverage through other subjects, pupils' recollections suggested this took one of two forms. Firstly, they remembered '*a few talks*' from subject teachers '*cropping up*' which were general about choosing options, '*... just saying this is the year you have to work for it and you have got to keep your options open*' (male, Year 10). Secondly and less frequently cited, some interviewees recalled that teachers had canvassed in lessons, encouraging pupils to take their subject at GCSE: '*When we got that* [options] *sheet, all the teachers were going "Right and aren't you going to pick music this year? These are all the good things ..."*' (male, Year 10).

- There was only one example of cross-curricular coverage of CE which did not include reference to Key Stage 4 options, and that was work on '*primary, secondary and tertiary jobs*' in geography which pupils in one school had covered. Incidentally, this was the same unit on industry that pupils in other schools had cited in Years 8 and 9, and which virtually constituted the full extent of CE in these years.

Careers Education as internalised

As was the case with IT and HE, CE emerged strongly as a subject that pupils believed was important. It was deemed the most important subject (joint with English and maths) for adult life, and was regarded as the joint third most important for a job and career after English and maths. Further, it was the third most helpful subject for pupils' personal development (joint with English and after PE and HE). It was also considered important for pupils' present-day lives, though here because it emerged as the fifth most important subject, there was intimation that pupils did not perceive CE as useful for their pupils' present-day lives as they did for jobs and adult life. This may be interesting in that pupil and teacher accounts in the case-study schools showed that a large proportion of the CE work in Year 10 focused upon a very immediate concern for pupils, that is the selection of options for Key Stage 4. CE was the joint third subject where pupils believed they had made best progress. It was not particularly liked or disliked, though, emerging as the seventh most enjoyable subject.

When the results were broken down by background variables, it was clear that the pupil and school types favouring greater CE provision also rated it more highly in terms of importance, that is girls, high-engaged pupils, those attending large schools, Catholic-managed schools, and schools with high levels of FSM eligibility.

Pupils' gender did appear to notably affect their internalisation of CE. Girls were markedly more likely than boys to enjoy CE and to consider it important for a job or career, for adult life and for their current lives. Related to this, pupils in single-sex girls' schools deemed CE more enjoyable and more useful for jobs and careers, for adult life and for their current lives than their counterparts in single-sex boys' and mixed schools. Regarding the religious orientation of the school, respondents in Catholic-managed schools compared with those in Protestant-managed and integrated schools, enjoyed CE more, found it more useful for their current lives, felt that it made a greater impact on their personal development and thought they had progressed better. Similarly, in comparison with their contemporaries attending small and medium sized schools, pupils in large schools were more positive about CE regarding its importance for adult life, their current lives and progress made. However, it is worth stressing again here the composition of the questionnaire sample, in that eight of the sample's 11 large schools were Catholic-managed and Catholic-managed schools made up seven of its nine single-sex girls' schools. It

may be the case that in pupils' internalisation of CE, the size and religious orientation of the school were not determining factors but rather the gender of pupils in attendance (female), especially considering the striking differences between boys' and girls' views on the importance of CE as highlighted above.

The comments of pupils interviewed in the case-study schools threw some light on why girls were particularly enthusiastic about CE. Only a sub-sample of the 60-strong case-study cohort were asked about their experiences of the CCTs, but in line with the questionnaire findings, more girls than boys remarked that they had enjoyed CE. Although the numbers commenting on this were small, there was the suggestion that it was the subject matter that was appealing to girls not boys. It seemed that evaluating one's likes and dislikes and skills, and imagining oneself in different occupations, were inherently more interesting to girls, reflecting perhaps a greater propensity for self-reflection and introspection. In explaining why she had enjoyed CE, one girl described an activity that involved learning about others in the class, the type of task that perhaps stereotypically might be seen as more appealing to girls:

> *We have done it a few times now. We have written out things about yourself and then you don't write your name on it, and then the teacher would read out a few of them and then you have to guess who that person is. ... It's a good crack* (female, Year 10).

Further, another girl explained why she had enjoyed CE: '*It was good. ... We got like leaflets, all different leaflets of jobs and stuff and she just gave us them out and talked about it, what we want to be and stuff, and what we need when we get there*' (female, Year 10). In contrast, a boy in this class was indifferent, describing CE as '*all right, not really like the best, but it's all right, like*' (male, Year 10).

8.5.4 Cultural Heritage as experienced and internalised

Cultural Heritage as experienced

A sub-sample of pupils in the case-study schools was asked about their experience of CH. The most striking feature of their responses was their confusion over the concept of CH. As was the case in Year 7, during Key Stage 3, pupils were unfamiliar with the term 'Cultural Heritage' and had difficulty understanding it. Having been asked about the other CCTs, one boy was incredulous by the time the researcher asked him about CH: '*Who gives them these names?*' (male, Year 9). It was necessary for the researchers to explain that CH entailed such topics as different people's ways of life, the ideas and things they had achieved in the past and NI's links with other countries. This explanation must certainly have coloured how they replied. It was only in Year 10 that a small number of high-attaining pupils did not need to be prompted.

In interviews with teachers in the case-study schools, more commented that they had covered CH than any other of the themes (though these teachers did represent a fairly small number of subjects). Further, observations of 28 school days showed that with EMU, CH was the CCT that was included in the highest number of lessons. Despite this, CH was the theme which pupils had the most difficulty identifying: in Years 7, 8 and 9, approximately one-third of those asked could not recall any work they had done which related to this CCT. That said, as they progressed through Key Stage 3, pupils did become more adept at recognising CH in their learning. Whereas in Years 7 and 8, neither the type of school nor the type of pupil appeared to affect whether or not they recognised CH, in Year 9, the type of school did emerge as a determining factor, as secondary school interviewees

had more difficulty than their grammar school counterparts in identifying CH in their learning. By Year 10, all but two of the pupils asked were able to recall work that had pertained to this CCT. This would suggest an improvement in pupils' comprehension and recognition of CH as they grow older – or as they were interviewed more about the concept.

As was the case in Year 7, and reflecting teachers' accounts, history was identified most often as the subject through which pupils experienced CH. Pupils did respond with differing degrees of sophistication when they highlighted work in history that pertained to CH. In Year 8, for example, the majority of pupils referred only to having looked at *'past things'*. Only three (high-attaining pupils) stated more specifically: *'In history ... we learn how they used to live and how it's changed over the years'* (female, Year 8). It could be the case that high attainers were simply more articulate in describing their experiences, but there was a sense that ability impacted on pupils' recognition (and perhaps internalisation) of CH. In Year 10, it was mostly high attainers who cited history as a subject through which they had covered this CCT. Comments made by two high-attaining and perceptive pupils did suggest the reasons why CH could be hard to identify in history. A girl relayed how CH would be *'really like mixed up with what we were doing. Like we were talking about the Ulster Plantation for a few weeks, and it was just kind of bits and pieces in that'* (female, Year 9). A boy implied that, without a label, it was difficult to recognise CH:

> You don't get taught it at all. I have only really heard the term in centres or something you go to, although maybe in history, you maybe learn it. They wouldn't be saying it's Cultural Heritage, but as you are learning what happened in the Easter Rising and all, I suppose that's part of it, although when you are learning it, it doesn't seem like you are learning about cultural heritage (male, Year 10).

This is interesting because it was clear from teachers' interviews and in the observations that they would not say to pupils *'Look out, here comes a CCT'* (geography teacher); rather they would simply emphasise them in their normal teaching. Given the evidence presented above, however, there may be an argument for sometimes making more explicit any reference to the CCTs.

Other subjects which were particularly mentioned by pupils as those through which they had experienced elements of CH included geography:

> In geography we done a wee bit about people in Africa, about food and all, where they had their houses and all. They didn't have much, so they couldn't set up factories because they didn't have the right climate, or they couldn't grow enough food because it was too warm and they didn't have enough rain (male, Year 10).

RE and PSE were mentioned as carriers of CH almost solely by pupils from a Catholic-managed secondary and an integrated school: *'In RE we are learning about the Jews and the ways they live'* (female, Year 8); *'In PSE we are doing different religions, to respect them and all and not like think somebody is better or something'* (female, Year 9). Only a small number of pupils detected any CH in modern languages:

> Sometimes, if we were doing French, [the teacher] would say about the way that they would probably say it in French or in France, or the way we were doing about the country France, just, you know, about the country and questions on it ... what France is famous for (female, Year 8).

Such instances were described particularly in Year 8 and would endorse the comments of their language teachers, who relayed that part of introducing the language to pupils was to acquaint them with the culture and customs of the country. However, the small number of pupils who cited languages as a carrier of CH was in no way proportionate to the number of language teachers who said they had addressed this CCT: all modern language interviewees, teaching all years of Key Stage 3, referred to their coverage of it, describing it as '*inherent in language teaching*'. Indeed, none of the pupils recalled maths, music, art or PE as subjects in which they had covered CH, and very few felt it had emerged in English or home economics; yet teachers of these subjects had described many instances of their coverage of this CCT. No pupil, for example, cited learning about imperial measurement in maths as CH, though all maths teachers interviewed, in line with the recommendations in the Programme of Study, had covered it in this way. That pupils are missing references to CH may be indicative of some difficulty with the Programme of Study recommendations for this CCT and its mediation in the classroom. Teacher accounts and observations did show that CH was conveyed in schools, and it may be that simply having CH present in the curriculum is deemed sufficient. However, if it is desirable that pupils recognise and internalise it, there may be a need to reconsider the specification and mediation of this CCT. Since, in both the pupil and teacher data, CH emerged as the most nebulous of the CCTs and because it was so implicitly taught through other subjects, it may be worth reconsidering its status as a CCT. So inherent was it in subjects like history, it might be supposed that it would be addressed anyway without it being a CCT.

Cultural Heritage as internalised

A number of issues regarding pupils' internalisation of CH (or lack of it) have already been raised. However, when those pupils who had detected elements of it in their learning were asked whether they had enjoyed this work, most pupils replied in the affirmative. Several commented that it was '*good*' to learn about different cultures, different countries and people in the past: ' ... *they didn't have electricity. They wouldn't have computers and things*' (male, Year 8). Work on Irish history was conspicuously popular, '*because it's related to you*' (male, Year 10). Each year, however, a few pupils did comment that they had not enjoyed the work either because it was '*boring*' or because they were already familiar with the content: '*I already knew there were poor people in Africa*' (female, Year 8); '*The little we learn* [about other religions] *is on the news*' (male, Year 10).

Although pupils did have difficulty in comprehending CH, it was clear that the work it entailed had been beneficial to pupils and frequently had a positive impact on them. They learned important skills, attitudes and knowledge through it: '*It shows you how to respect other people*' (female, Year 10); '*I suppose it lets you know not everyone lives in the same way*' (female, Year 8); '*It's important to know why you are here in whatever country, why you are the religion you are*' (female, Year 10). One girl recounted that members of her family were Jehovah's Witnesses – ' ... *they don't go to church or mass or anything like that, they are a lot, lot different*' – yet work on other religions had helped her develop '*respect for what they are*' (female, Year 10). Pupils showed great sensitivity in their response to the work they had done. One girl, asked whether it was important to learn about CH, replied: '*Yes, because you should know about the kind of rights you have, the right you have to be who you are.*' And a boy stressed that, without this kind of work, people who had lost their lives in struggles, like the Easter Rising, would be forgotten:

> *A lot of the time that stuff would be forgotten about if anyone didn't teach it. ... Even though it wasn't that long ago, it's still pretty vague. If*

*you asked anybody 'What is it?', they would sort of say 'Oh, it was
when rebels ...'. Most people would give you a pretty vague answer.
So, it's important, I think, to learn it. It seems like a bit of a shame –
people died and a hundred years later, people just say 'Oh, it was when
these people ...'. It doesn't seem like the people even know their names
...* (male, Year 10).

8.5.5 Education for Mutual Understanding as experienced and internalised

Education for Mutual Understanding as experienced

According to pupils' accounts, at Key Stage 3 the other CCTs were addressed most often through the subjects of the NIC. EMU, in contrast, they saw as conveyed primarily through PSE (or its equivalent). In Years 8, 9 and 10, the vast majority of pupils identified this subject as the one through which they had learned about respect for others, bullying, building relationships, resolving conflicts and taking responsibility. Each year, only a handful of pupils recalled having covered such topics in NIC subjects: of these, RE was mentioned most often, primarily by pupils attending the two Catholic-managed case-study schools. In Year 10, interviewees in one school cited work on '*if there's an argument, how to settle it*' in home economics. That PSE did emerge so strongly perhaps shows the importance of this subject in conveying EMU.

In their accounts of what they had covered as part of EMU, work on bullying was often described, especially in Year 8:

*I think in pastoral we have really learnt about that. If anybody was
bullying, you would just stand up for yourself and tell someone. If
anyone was bullying anyone else, you would stand up to them and to
other people, just say, like, 'Leave them alone, there's nothing wrong
with them'* (male, Year 8).

Work on friendship – '*we have done how good a friend you are*' – and conflict resolution was also cited. Respect for others was often mentioned, though less so by youngsters in one of the grammar schools. From pupils' descriptions, most of this work on respect appeared to be general – '*just about respecting others*' – or it was related to pupils' present-day lives: '*We done about showing respect for other people and to line up for the dinner queue ... not knocking people down*' (male, Year 9); '[... we have been] *doing questions about do you think you should have respect for your parents and things like that*' (female, Year 9). A few pupils did recall having looked at '*respect for different people and what they believe in*' (female, Year 8), and this tended to be emphasised in RE. This focus was less frequently mentioned, though, but it might be supposed that the skills and attitudes learned from work generally on respect for others would be transferable to different religions.

Pupils gave few examples of work which had been set in a current NI context. One girl recalled work on '*understanding different religions*', and another girl, attending an integrated school, remarked that in PSE, she had covered '*integration ... how everyone should be accepted and why integration is good and stuff*' (female, Year 8). Only when specifically asked by the interviewer '*Have you done any work on Catholics and Protestants in NI?*' did pupils in a grammar school recall that they had done work on the Troubles in history: '*We've been doing a bit of Irish history in history, how it all started up*' (male, Year 10); '*We learnt about the Catholics and the Protestants ... and learnt how the Catholics feel about the*

marching things and then learnt how the Protestants feel about it' (female, Year 9). Because these youngsters did remember this when asked directly, this would suggest that other interviewees had done similar work, yet they did not equate this with EMU. That said, however, when, in Years 8 and 9 in another part of the interview, pupils were asked if they had done any work on 'situations and issues in your community', the majority, spread across all schools, could not recall having covered anything which related to this. (Here, though, interviewees' comprehension of the question might have been an issue: the pupils described above who had done work on Irish history and *'marching things'* did not always cite this in answer to this question.) When asked, interviewees expressed that they would like to see greater attention given to helping pupils understand the problems in NI. They felt that this might be beneficial to society at large: *'Because with all sort of like sectarian violence and things, it might resolve it'* (male, Year 10); *'Because it might help people who don't really understand too much about what's going on ... then they won't do anything stupid really, they might not turn out to be terrorists or anything'* (male, Year 8).

Each year of Key Stage 3, most pupils could recall times when aspects of EMU had been covered in their learning, though it was noticeable that they could recall most in Year 8. This may be because many aspects they identified – bullying, friendship – would have been part of schools' induction programmes to settle new pupils. There was also a difference between pupils' experience of EMU in Key Stage 3 compared with Year 7. Pupils' involvement with other schools through EMU activities was much more a part of pupils' experience of this CCT in primary than in post-primary school. In Year 7, over half the case-study pupils had been involved in EMU trips with other schools. At post-primary level, only pupils from secondary schools had taken part in such activities, mostly in Year 8. In one school, Year 8 pupils went on a residential experience where they shared accommodation and some activities with a school of a different religion: *'We went to X with another school – St X – and just learnt to be friends with them'* (male, Year 8). Also in that year, the top set for English had met with and exchanged work with a class from a school of another religion. This collaboration had been limited to one class, however, and it did appear to be the case that, whereas in Year 7 all pupils in the year would have been involved in the cross-community work, at post-primary level, probably reflecting the numbers involved, there was no such common entitlement. Pupils in the two grammar schools reported that their only association with schools of a different religious denomination had been through sports games, matches and tournaments, and again this was limited to pupils in the school teams. In one of these schools, the case-study pupils had not been involved in joint activities with other religions in Year 7. The orders for EMU recommend that pupils have these opportunities, so it would appear therefore that from the last year of primary school to the end of Key Stage 3, a substantial part of these particular youngsters' EMU education had been lacking. In this school, pupils also made least reference to having done work on respect for others.

Another difference was evident in pupils' accounts of their experiences of EMU at primary and post-primary level. In Year 7, a substantial minority of pupils had acknowledged that through their teacher's class management style, they had been encouraged to learn respect for one another. As the earlier section, 'Curriculum as Mediated', showed, more than half of the post-primary teachers interviewed commented that they emphasised EMU-related values – respect, consideration, cooperation – in their teaching style or classroom practice. However, during Key Stage 3, although such values were deemed by pupils to be covered in the content of lessons, none of the case-study pupils interviewed raised their teachers' actual teaching style or the values teachers promoted in the classroom as a means through

which they experienced EMU. It may be that in primary school, because pupils are constantly exposed to one teacher's values, they are able to pick up on these more easily. At post-primary level, it would seem that the effect is diluted because pupils see a different teacher in every lesson. The strength of the school ethos might help to rectify this to some degree, however. As was shown earlier, senior managers believed that EMU was conveyed through the school ethos, and in one school where there was much emphasis on raising self-esteem, two girls did comment that teachers were always trying to boost their self confidence because self-esteem was a '*big thing in this school*' (female, Year 9). However, such comments were very much the exception: these girls were only from one school and were both very high-attaining and perceptive pupils.

Education for Mutual Understanding as internalised

Most pupils had found the EMU-related work they experienced enjoyable. A few pupils commented that this was because they had liked the subject matter: '*I enjoy it because it gives you a chance to know different things about different people, like where they live, and what foods they eat, different things like that*' (boy, Year 8). However, most stated they had enjoyed the learning task:

Interviewer: *What did you enjoy?*

Interviewee: *I don't know. It's just we did quizzes and stuff to see how responsible you are, and it was just all these quizzes. It was fun* (female, Year 8).

The appealing learning task was part of pupils' enjoyment for most of the CCTs, but it was a particular feature here, primarily because of the discussion work which, according to pupils' accounts, was the main way in which PSE, the principal carrier subject for EMU, was mediated: '*It's good fun, because we are allowed to sit in, like, a big semi-circle at the front of the class and have a big discussion*' (female, Year 9); '*... in pastoral care all we do is talk ... so I just like listening*' (female, Year 8). PSE emerged as a popular subject among pupils. One boy enjoyed the opportunity it gave pupils to express and discuss their own views and also to take a more active part in lessons; he advocated the adoption of this approach in other subjects:

> *I think there should be, maybe not a lot, but some time to talk. ... I think that's what it should be, like instead of you go in, you work, you come out, you work. ... There should be more just open conversation rather than just the teacher calling out your writing. I think there should be more like conversation between the class and the class and the teacher* (male, Year 8).

Further differences between PSE and other subjects were also appreciated: '*It's different from other subjects; it gives you a chance to think about what other people are like*' (female, Year 8); '*It's the only class where you don't ... it's not like any other class where you learn stuff*' (male, Year 10).

Pupils did find the EMU-related work valuable; however, there was a development in their views as Key Stage 3 progressed. In Year 8, there was consensus amongst interviewees that the work they had done on friendship, good manners and respect for others had been valuable. In contrast, however, in Year 9 and then especially in Year 10, pupils, in particular high attainers, began to express how this work was '*common sense*' and that they did not learn anything from it. One girl, for example, described how work on politeness and respect had '*reminded us of things like being nice to others and whatever*' but '*it didn't teach us a lot ... because like we know that*' (female, Year 9). Similarly, a task which had involved pupils deciding

who they would turn to for different problems had been of little value for another girl: '*You know the answer in your mind already; it's just putting it on paper*' (female, Year 10). This change in attitude over the course of Key Stage 3 was epitomised by one boy. In Year 10, he felt that work on respect for others did not '*seem as important as it would have been a couple of years ago*' because '... *if you don't respect the people by now, I don't really think you are going to*' (male, Year 10). And indeed, only '*a couple of years ago*', when this boy had been in Year 8, he had expressed the opposite view and had been convinced of the value of learning how to respect others: '*It's important to learn because if you don't sort of respect others, no one is going to respect you*' (male, Year 8).

Only a handful of pupils who had taken part in EMU activities commented on their value. As was the case in Year 7, these activities did not always result in a change of views: one boy who had been on a residential with pupils of a different religion recalled that the two groups had not talked to each other: '... *it's probably because they're a different religion ... The Catholics don't like the Protestants and the Protestants don't like the Catholics*' (male, Year 8). However, other pupils felt that these experiences had improved their social skills generally – '*It helped me get on better with other people ... be more friendly to people*' (male, Year 8) – and had made one girl '*learn how different people get on and the different lifestyles they have*' (female, Year 8).

8.5.6 Economic Awareness as experienced and internalised

Economic Awareness as experienced

In interviews with staff, EA was the CCT which, after CE, the fewest number of teachers mentioned having covered in their lessons. This was endorsed by observations of 190 lessons that showed that, again after CE, least mention was made of EA in the classroom. Pupils' accounts of their experience of EA indicated that it had a limited presence across the curriculum and was instead rooted in two subjects, home economics and geography. In Years 8 and 9, these were the only subjects which pupils identified as having contained reference to this CCT; in both years, home economics was cited most frequently. In Year 10, these subjects emerged again as carriers of EA. However, this year, cross-curricular coverage was slightly greater, though it was the presence of CE in the curriculum, another CCT, which facilitated this rather than an increase in coverage through the subjects of the NIC.

In their interviews, geography and home economics teachers explained that EA was inherent in their subjects, with two teachers remarking that the Programme of Study for home economics addressed the EA objectives. In pupils' accounts of their experience of EA, there was a sense that coverage of this CCT was the result of the curriculum specification for these subjects, especially home economics. Youngsters from across the five schools cited the same pieces of work in their descriptions of EA. In home economics, this was principally work on money management, buying and selling, and consumer rights: '*We have done about how to save money and how to plan out how you're going to spend your money*' (male, Year 8); '*We were learning about how to buy things, if we want to complain, consumers and things like that*' (female, Year 9). In geography, pupils particularly identified work on primary, secondary and tertiary industry, locations of factories and trade: '*We have done work on primary industry and farming*' (male, Year 10); '*She told us all about ... if you wanted to set up a factory, where the best place would be*' (male, Year 10).

This does show that pupils receive a similar experience of EA regardless of the school they attend. However, it might also indicate that provision of this CCT is almost completely reliant on the curriculum specifications for two subjects, in particular home economics. In this way, EA did not appear to be a CCT at all, but rather units of work in geography and home economics. And indeed because of this, it might be posited this could be used to develop lateral coherence across the curriculum by linking up home economics and geography. There was only one example of coverage of EA which went beyond the Programmes of Study: in one school in Year 10, pupils relayed that they experienced economics and business studies on a modular basis.

A final finding of note – during Key Stage 3, only one pupil, a high-attaining girl, identified maths as a subject through which she had experienced EA: '*We do that in maths with the exchange currencies*' (female, Year 10). This was despite the fact that in interviews maths teachers had averred this CCT was '*very easily delivered*' through their subject. It may be that, as was the case with the coverage of CH through history, reference to EA in maths was '*really like mixed up*' with the content, and was therefore difficult for pupils to detect. This may again suggest a need for more explicit reference when the CCTs are mediated in class.

Economic Awareness as internalised

In terms of their enjoyment of EA, pupils tended to be most positive about what they had done in Year 8. Later in Key Stage 3, they were more indifferent: '*It wasn't like really enjoyable, but it wasn't like detestable ... there was nothing to stand out about it, like nothing interesting*' (female, Year 9). For those pupils who had enjoyed EA, it was often the learning task – '*we did drawing and stuff and diagrams*' – which was appealing. A few had enjoyed the content, however: '*I just liked doing the different things ... how to get trade and that and where is the best place to put my factory making stuff if you want to build a factory*' (male, Year 9).

Findings reported earlier showed that pupils believed that other CCTs, like IT, HE and CE, were relevant for their current lives as well as for their adult lives. EA was similarly perceived. Youngsters had found work on money management particularly important and explained why it was useful for both their lives now and their futures:

> It's knowing how to save your money and not to waste it ... because if your mum gives you birthday money, and you just go right out and buy a dress ... but then you see something you really like and you like it more than that dress, then you have used your money and can't go out and buy that thing (female, Year 8).

> The money saving definitely [is useful], because when you grow up, you are going to have your own account eventually (female, Year 9).

Work on how businesses operate was also considered important for the long term: '*If someone wants to go into business when they are older, and then from this, they are just going to realise that they have no chance and they are totally inexperienced*' (male, Year 10). There was some dissent here as some pupils, taking a more immediate view, did not think this kind of work was valuable, because it was irrelevant '*at this age*'.

8.6 Conclusion and implications

The findings discussed in this chapter have shown that, despite their identical status in the NIC, the treatment of each of the CCTs was very different. For example, IT and HE were taught as discrete provision and through subjects; CE was practically non-existent until Year 10; and EMU was conveyed through the complex network of the school ethos, teachers' values, ways of working in lessons, subject content and cross-community activities. Variation was also apparent in the extent of different schools' provision of the CCTs, especially IT.

Pupils' experiences and perceptions of the CCTs raised the following issues:

♦ Compared with girls, boys were less positive about HE as they progressed through Key Stage 3. They were also less enthusiastic about CE. This possibly highlights a need for curriculum designers and schools to reconsider the content and mediation of these CCTs in order to ensure that they appeal to boys and meet their needs.

♦ Throughout Key Stage 3, the value which pupils attached to IT and HE was not reflected in their experience of these. IT, HE and CE, deemed important by pupils, were peripheral in the NIC and in schools' coverage. For example, pupils considered IT almost as important for a job and career as English and maths, yet when taught as a separate subject, it occupied less than five per cent of the timetable, and when taught only as a cross-curricular theme, it had even less time still. A curriculum designed and mediated from the pupils' perspective would take greater account of IT and HE throughout Key Stage 3 and of CE in Year 10.

♦ However, related to the above point and with particular regard to IT, an issue emerged surrounding how curriculum designers and schools might act on pupils' desire for increased coverage of this CCT. An obvious solution might be to make IT a subject of the NIC. Yet, in their responses to the questionnaire and in interview, those pupils who experienced IT as a separate subject did acknowledge dissatisfaction with the way in which it was mediated. In the annual pupil survey, IT consistently emerged as a subject where pupils were underworked in class, and case-study pupils, especially computer-literate interviewees, also referred to the slow pace of IT lessons in which they were taught alongside their peers who had no experience of computers. These findings would suggest, therefore, that as well as considering the amount of IT provision pupils receive, curriculum designers and schools might also need to ponder how IT might be better mediated, especially to ensure it meets the needs of all pupils. Differentiating tasks or teaching in ability groupings were raised by both case-study pupils and teachers as means by which the mediation of IT could be improved.

♦ Also concerning IT, despite the importance they attached to this CCT, when the case-study pupils had (some) control over the curriculum and could choose their options, very few grammar school pupils selected IT. This perhaps suggests that, whatever they deem to be IT's vocational relevance, these pupils were aware that it does not have high academic status. This might suggest a need to raise the academic profile and standing of IT as a core skill.

♦ Several instances emerged where teachers had addressed the CCTs in the ways recommended in the Programme of Study for their subject; yet their pupils did not recognise this as coverage of a CCT. They did not, for example, equate the study of imperial measurements in maths with CH. This perhaps calls into question the appropriateness of some of the recommendations in the Programmes of Study for some subjects. Further, it may also highlight a need for teachers to make more explicit any reference to the CCTs in their teaching. This might even involve the labelling of the CCTs as they are covered in the classroom. Comments made by a number of high-attaining interviewees suggested that this might improve pupils' recognition and internalisation of the CCTs, particularly CH and EA. However, interviews with staff did suggest that this would not be popular with teachers: no teacher interviewee said that they made it explicit to pupils that they were covering a CCT, and it was clear that they preferred the themes to be '*organic*' in their teaching.

♦ Experience of the CCTs could change behaviour – pupils cited how through the CCTs they had learned how to respect others, save money and eat more healthily. Pupils did regard the CCTs as useful. However, particularly with regard to EMU and HE, there was a sense that as Key Stage 3 progressed, pupils, especially high attainers, were less convinced of the value of these. By Year 10, these pupils were beginning to describe the work they had done on respect for others as '*common sense*' and to acknowledge that they already knew about this. There may, therefore, be a need to change the emphasis of EMU in Year 10 and beyond, away from work generally on respect for others, to some conceptually and behaviourally more challenging work, perhaps taking in conflict resolution, arbitration, identity formation, and relevant aspects of sociology and psychology.

9. SUMMARY AND CONCLUSION

9.1 The study

This report has set out the detailed findings to emerge from the Key Stage 3 phase of the NI Curriculum Cohort Study. Commissioned by the NI CCEA, the research was funded by DE (NI) and the Esmée Fairbairn Foundation. NFER conducted the study.

Aims

The overall aim of the research was to provide evidence of the impact of the whole curriculum as seen from the perspective of the learner. In particular, the project set out to investigate pupils' experiences of key curriculum design concepts such as breadth and balance, coherence, appropriateness and relevance, continuity and progression, manageability and enjoyment.

Research methods

To meet these aims, the study drew on a large set of quantitative and qualitative evidence collected through:

❏ annual surveys administered at the end of Years 8, 9 and 10 to a ten per cent representative sample of all NI pupils in the 1996 Year 8 cohort (2,694 pupils);

❏ annual school surveys to the 51 schools from which the pupil cohort was drawn, along with timetables for the years in question;

❏ case study research in ten primary and five post-primary schools, the latter normally comprising two 3.5-day visits to each school per year, which typically involved in each school (including the primary school visits):

❖ interviews with the same 12 pupils (394 interviews in total);

❖ a day's pupil pursuit observations (37 observed days in total) and follow-up pupil interviews (136 in total);

❖ interviews with teachers and senior managers (114 interviews in total); and

❖ indirect data collection activities with 21 pupils at Year 8 and 18 at Year 10 (e.g. concept mapping).

In addition, the researchers collected the survey pupils' Key Stage 3 test scores in English, maths and science (according to which pupils were assigned to one of three attainment groupings).

To assist the analysis of these data, a typology of different levels of curricular action was used to distinguish between the curriculum as specified by Government, the curriculum as planned by schools and their departments, the curriculum as mediated by teachers, the curriculum as experienced by pupils and the curriculum as internalised by pupils.

9.2 Breadth and balance in the curriculum

A common curricular entitlement?

A broad, balanced and common curricular entitlement was widely accepted to be one of the prime justifications for the introduction of national curricula. However, evidence on the time allocated by the 51 (NI) schools to different subject areas established that whilst schools may work to a common framework (curriculum as specified), at the level of implementation (curriculum as planned), the Northern Ireland Curriculum (NIC) did not exist as a single entity. In reality, schools offered pupils a variety of NI curricula rather than a common NI curricular entitlement. Overall, languages were prone to the greatest variation, but music, technology, RE, PE and art were each allocated widely varying amounts of time depending on the school.

Further analyses of the Year 10 data revealed six main types of curricula, which were closely allied to particular types of school:

- ◆ Languages light   **Protestant-managed secondary**
  The practical-active curriculum with average RE

- ◆ RE and languages light   **Protestant-managed secondary**
  The practical-active curriculum with reduced RE

- ◆ RE heavy and languages light   **Catholic-managed secondary**
  The humanities curriculum

- ◆ Languages heavy   **Catholic-managed secondary or**
  The academic-oriented curriculum   **grammar**

- ◆ RE and languages heavy   **Catholic-managed grammar**
  The academic curriculum with RE emphasis

- ◆ Languages heavy and RE light   **Protestant-managed grammar**
  The linguistic-scientific curriculum

For the most part, these different types of curricula were provided by schools which pupils attended largely according to their religious orientation and performance in the Transfer Test (for English, maths and science) rather than on the basis of their needs, interests and aptitudes in the particular type of curriculum they will experience.

Limits to breadth and balance

Only four per cent of schools were meeting the minimum percentage time allocations suggested by NICC (1991) in all subjects. Music, art, PE/games and technology were the subjects most likely to receive less than the recommended times. Overall, in the light of this and above evidence, arguably few schools could be said to be providing a broad and balanced curriculum. Nevertheless, most teachers generally approved of the overall breadth and balance in the NIC and their school's time allocations to different subject areas. However, a sizeable group of teachers, including several Year 7 teachers, expressed concerns about the heavy concentration on the core academic areas and the limited time available for the 'minority' subjects.

Pupils on the lack of balance

Pupils' views on the balance of the curricula were fairly consistent across all three years of Key Stage 3. Pupils in general – but grammar school pupils in particular – felt that too much time was spent on languages, maths and English, while too little time was devoted to practical subjects, particularly PE, IT, the expressive arts, home economics, health education, technology and, in Year 10, careers education. Interestingly, it was low-engaged pupils, again especially those from grammar schools, who were most likely to consider that academic subjects were over-weighted and induced boredom. Such findings fuel concerns that curricula which lack balance may be important contributors to pupil disengagement, and ultimately disaffection.

Pupils' reasons for thinking that subjects were over-represented on the curriculum often focused on the allocation of too many periods, topics lasting for too long and lack of relevance. Alternatively, the main reasons proffered for believing that several subjects received too little time were enjoyment of the subjects (particularly in the early years of Key Stage 3), relevance and impairments to the manageability and quality of learning.

Pupils on the need for greater breadth

To explore perceptions of breadth in the curriculum as experienced, pupils were asked whether there were areas that had not been covered sufficiently. Whereas half the Year 8 pupils thought there were, in Years 9 and 10, over two-thirds believed there were (73 and 69 per cent respectively). In each year, PE, IT, languages, drama and PSE-related topics (including sex, drugs and health education, first aid, life skills, child care) dominated the list of topics deemed insufficiently covered. Careers education and business studies were also highlighted in Year 10. Notably, more grammar school pupils than their secondary school peers indicated that there were areas that they felt had been insufficiently covered in their learning.

Overall, pupils sought greater breadth and better balance in the Key Stage 3 curricula.

9.3 Coherence across the curriculum

Limited commitment to achieving coherence in the whole curriculum

In this chapter, we concentrated on pupils' experiences of lateral or between- and across-subject coherence. We began by noting that unlike other curriculum design principles (e.g. breadth, balance and relevance), coherence across the curriculum is not widely regarded as an essential feature of an effective curriculum. Indeed, this may help explain the acceptance of the piecemeal, subject-based approach to the development of national curricula. Although some attempt was made in Northern Ireland to address the issue of coherence through the concept of 'Areas of Study', the research found that schools rarely used these categories in curriculum planning, they were not part of teachers' frames of reference and they had virtually no experiential impact on pupils.

Pupils were generally not aware of any planned coherence in the courses offered by schools. Nevertheless, about half of the schools (in the Year 10 Survey) had at least one policy for teaching some skills across the curriculum. Cross-curricular policies for IT, PSE skills and study skills were cited more frequently than those for literacy and numeracy. There was some evidence that the existence of such policies was related to the frequency of pupils' perceptions of cross-curricular learning, at least as far as IT and PSE were concerned. Teachers reported that they let cross-curricular links occur through serendipity rather than deliberately building them in.

The consequences of a fragmented whole curriculum for learning

However, evidence from the pupil pursuit observations suggested that relying on serendipity could be a highly inefficient strategy that fails to maximise the potential for learning. The observations showed how pupils' days were strongly compartmentalised into a series of episodic and subject-based experiences, typically with high-profile internal narratives but minimal references to learning in other areas. Yet, however limited and partial their perspectives may be, pupils had a greater experiential awareness of the actual continuities across subjects than their teachers. That said, the observations often demonstrated how many valuable opportunities to construct creative connections and extend learning between the skills, knowledge and intelligences offered by different subjects passed by unnoticed and untapped for both teachers and learners.

Pupils' images of the whole curriculum

Not surprisingly, given the bounded nature of the curriculum as experienced, pupils tended to internalise the whole curriculum and their learning within it predominantly in subject categories. Signs of any development over the Key Stage 3 phase towards more overarching and less subject-based constructions of the whole curriculum were negligible – even for high academic attainers. Through such techniques as concept mapping when pupils were asked to draw a diagrammatic representation of 'All I can learn at school', three main constructions of the whole curriculum emerged, as pupils mapped their learning according to:

♦ common content knowledge across subjects;

♦ perceptions of different subjects' relative usefulness and/or importance; and

♦ two broad dichotomous categories: *'practical'* versus *'academic'* subjects.

Far from helping learners to find coherence in the curriculum, in the sense of assisting them to pull together its different elements, the latter two may encourage them to do the opposite – to push it apart. Thus, they may lead to curricular fission rather than fusion.

Pupil perceptions of cross-curricular learning and its potential benefits

The most frequently perceived link between subjects was that between geography and science. Science frequently appeared in nominated links, while IT and the expressive arts were rarely cited. Commonalities in content knowledge represented

the dominant mode through which learners perceived continuities between subjects. In contrast, there were appreciably fewer references to skills-based perceptions of cross-subject links – a finding that could pose challenges to any move towards a skills-based curriculum as specified. There was evidence to suggest that low academic attainers had greater difficulties in perceiving continuities or links in their learning across the curriculum.

In each year, a solid majority of pupils affirmed that the links they perceived between subjects had helped their learning. The most frequently cited reason for valuing cross-curricular links was that they helped pupils learn in more depth or more detail, develop a better understanding and aid their progress. Although mere duplication was seen as tedious and demotivating, many pupils saw value in learning about things from slightly different perspectives. In short, most pupils sought greater coherence across the curriculum and valued the benefits of this for their learning.

The evidence suggested that numerous valuable learning opportunities for exploring links across the curriculum were lost to both pupils and teachers. Additionally, in the absence of any significant guidance to the contrary, the concept maps indicated that some pupils internalise images of the whole curriculum that may have deleterious effects on their learning and motivation. In view of these and other problems, it seems appropriate to raise the question as to how pupils and teachers could be given regular opportunities to collaborate in the framing of creative and constructive models of their learning across the curriculum as they experience it. In a sense, this would be to encourage pupils' and teachers' meta-awareness of their learning and the curriculum.

9.4 Continuity and progression, progress and assessment

Establishing continuity within and between Key Stages?

As well as coherence across the curriculum, the study also examined coherence over time, namely continuity and progression within subjects. According to many teachers, the NIC had been largely successful in providing a *'framework'* that had led to greater continuity in their subjects within Key Stage 3 than had existed prior to its inception. However, identifying four main obstacles, a majority of Year 8 teachers maintained that continuity between Key Stages 2 and 3 was still problematic:

♦ variation in the knowledge and skills of pupils transferring from different schools;

♦ pupils transferring without the skills or knowledge to tackle Key Stage 3 work;

♦ unhelpful coverage in Key Stage 2 of Key Stage 3 material; and

♦ disruptions to continuity in subjects caused by the Transfer Procedure.

The evidence demonstrated that teachers saw themselves as developing the internal coherence of their subject over the duration of particular topics or through the Key Stage. However, although most children could detect some form of 'follow-on' in their learning, it emerged that only high academic attainers were discerning

continuity in the way in which it had been planned by their teachers. For example, it was only the highest-attaining pupils who recognised that over the course of a topic in maths and science, the level of work would increase in difficulty, and who showed awareness that in languages they needed to apply all that they had covered previously to understand their current work. The vast majority of pupils lacked awareness of teachers' *'master plan'* for progression, and therefore had only a partial view of the internal coherence within their subjects. Analyses of the pupil pursuit observations established that continuity and progression tended to be implicit in lessons rather than explicitly explained to pupils.

How continuity and progression could be experienced by more pupils

Pupils generally felt that their lessons had followed on from the previous one, though least follow-on was perceived in several practical subjects, especially PE and music, but also art and home economics. History attracted the greatest degree of perceived continuity, followed by maths, geography and technology. As they progressed through Key Stage 3, pupils usually observed more continuity in their lessons. Pupils' capacity to perceive continuity and progression was closely associated with their level of academic attainment. Low attainers discerned the least continuity in their subjects and made the least advance over the Key Stage in the amount detected. Indeed, in Year 10, low attainers were not seeing the levels of continuity which high attainers had observed in Year 8.

It emerged that the influence of attainment encompassed not only how much continuity was recognised, but also how it was perceived. From interviewees' comments, a continuum of perceived follow-on emerged: 'extraneous procession' (typically, proceeding through a textbook); 'clustering' (the continuance of the same subject matter for a period of time); and 'incremental acquisition' (the progressive build-up of new knowledge and skills). The research found that there were greater concentrations of low and high attainers at the opposite ends of the continuum, with more low attainers restricted to 'extraneous procession' and more high attainers describing 'incremental acquisition'. The type of follow-on pupils perceived was seen to mirror their evaluation of continuity. Thus, high-attaining pupils who identified 'incremental acquisition' were most likely to volunteer that this aided their understanding of the subject matter under study. There are signals here that emphasising 'incremental acquisition' in the content of the curriculum, as well as in teaching approaches, could have major benefits for enhancing learning.

Transferring learning from one year to the next?

Throughout the study, the vast majority, around 70 per cent, of pupils felt that their previous year of schooling had prepared them well for the current year. Similarly, most agreed they had learnt more in their current year of schooling than in the previous year. However, confirming teachers' concerns about the lack of continuity between Key Stages 2 and 3, Year 8 emerged as the year that involved the most repetition of the previous year's studies. There was also a warning that pupils' transfer to certain types of post-primary school proved particularly stressful. In Year 8, those children attending grammar schools, single-sex, especially all-girls', schools and large schools were all markedly less likely than their comparative groups to have enjoyed their first year at post-primary school more than their last year at primary school.

Making progress

Pupils rated their progress in all subjects positively, but especially so in PE. Their level of attainment made no conspicuous difference to the degree of progress they felt they had made. In Year 9, there was a fall in pupils' perceptions of the amount of progress made in their subjects. This corresponds to the general downturn in pupils' opinions of the curriculum in Year 9 when their estimation of its breadth and balance, relevance and – crucially in terms of progress – its manageability and their enjoyment of it – all declined, to recover slightly in Year 10.

Pupil evaluations of assessment and its impact on motivation

The Years 8 and 9 survey results showed that the majority of pupils considered examinations and reports to be the most effective means of gaining feedback on their progress and attainment. In the main, pupils valued examinations and tests particularly because they provided a clear-cut indication of how an individual was performing.

In Year 10, pupils gave their views on the impact of the Key Stage 3 tests. From the survey data, it emerged that most pupils believed that the Key Stage 3 tests had made a difference to their lives and work at school, as well as their lives outside school, with grammar school pupils feeling this most keenly, particularly the pressure of taking the assessments. Additionally, the case-study data revealed that the tests had a significant impact on the learner's experience of the Year 10 curriculum. The findings suggested that the tests distorted progression and learning within English, maths and science, and jeopardised the manageability and the breadth and balance of the whole curriculum. Furthermore, pupils' perceptions of the relevance of their subjects were influenced in questionable ways.

That said, it should be borne in mind that we have speculated that the tests (along with the options process) were a key factor in ameliorating, in Year 10, the disengagement from the curriculum that beset many pupils in Year 9. Indeed, this hypothesis was verified by interviewees' comments: a grammar school boy confessed that whilst Year 9 had been a '*joke*', in Year 10, '*... you have to be more focused with the Key Stage 3 exams coming up*'. Moreover, in the survey, a substantial proportion of pupils felt that the tests had made them learn more, and additionally, albeit in smaller numbers, respondents indicated that because of the tests, they had worked harder, felt prepared for taking GCSE examinations, were now more committed to learning and were more aware of the importance of school.

Therefore, it appears that pupils' motivation and learning were enhanced in a year when the progression, balance, manageability and relevance of the curriculum were all disturbed. A similar scenario was also described in Year 7: as well as stressing the most damaging impact of the Transfer procedure on the upper Key Stage 2 curriculum and also on pupils' well-being, a number of Year 7 teachers held that the Test kept youngsters '*on their toes*' in the final year. This perhaps raises some fundamental questions for curriculum designers regarding the role of formal assessment in the NIC: firstly, whether it is appropriate that pupils appear to be motivated by assessment and see more purpose in education when it has a test at the end of it; secondly, the extent to which the current assessment system has been responsible for developing these highly instrumental attitudes in pupils; thirdly, if teachers and curriculum designers can mount a curriculum where the subject matter and skills intrinsically motivate pupils rather than the extrinsic drive towards assessment.

9.5 Relevance and appropriateness

The research sought pupils' opinions on the relevance of the curriculum to their current needs, to life in the future and to careers, and also their views on gender relevance.

Pupils on the relevance of the curriculum to their current needs

The subjects perceived to be most relevant to current needs were maths, IT, PE, English and, in Year 10, careers. The corresponding least relevant subjects were music, art, Irish, French, RE, history and technology. Music in Year 10 posted a particularly high score for irrelevance. The lack of relevance associated with languages was noteworthy, given that a third of the schools afforded this area the most teaching time. In Year 8, pupils seemed generally positive about the value of the curriculum for their current needs. But over the three years, most subjects declined in terms of perceived current relevance (especially art, music and French); only maths and PE stayed broadly the same, and only IT increased. Thus, in Years 9 and 10, a majority of subjects were seen as conspicuously less useful, especially by grammar school pupils. In Year 9, these pupils expressed a narrower view of relevance, limited to the academic core (English, maths, and science), along with IT, and attached much less importance to practical and arts areas. By Year 10, there was less disparity between the two types of school, because relevance for secondary pupils declined in Year 10, while the perceptions of their grammar school peers remained similar to those expressed in Year 9.

Pupils on the relevance of the curriculum to their future needs

The broad pattern of perceived relevance for future needs (*important – or not – for adult life*) was similar to that for current needs, in that the same clusters of subjects appeared at the top and the bottom of the rank ordering for each year. Pupils in Years 8 and 9 appeared to find the curriculum less useful for the future than for their current needs. In Year 10, pupils' perceptions appeared to be slightly the reverse. Modern languages and the creative arts were consistently seen as the subjects least useful for the future, just as they were perceived as the least important for pupils' current needs.

Although most pupils believed the majority of their subjects would be relevant to them for adult life, grammar school pupils were less positive about the value of certain subjects (e.g. the arts, languages and maths) than their secondary counterparts. A parallel between the scores of high attainers and grammar school pupils emerged in the increasing importance they attached to IT and in the narrowing range of subjects deemed to be important. Taken together, and bearing in mind a similar emphasis on utilitarian values from these groups in the scores for relevance to current needs, it seems that these two groups may already be disposed to value a relatively limited range of subjects in Year 8. By Year 10, their curricular experiences (and perhaps other influences outside school) may have encouraged them to see their future exclusively in terms of academic and career success, and to this end to become predominantly focused on what they believe will most effectively help to achieve these goals.

Pupil perceptions of vocational relevance

English, maths and IT, with the addition of careers in Year 10, were believed to be the most vocationally relevant subjects by all three year groups. Music, RE, Irish, drama and art were found to be the least vocationally relevant subjects, becoming gradually less important over the three years. Apart from the notable instances of IT, science and maths, vocational relevance declined for most subjects over the Key Stage. The results from grammar school pupils presented a polarisation between the few subjects (i.e. English, maths and IT) they perceived as having great vocational relevance and the majority of subjects which were viewed as almost vocationally irrelevant. While secondary school pupils' perceptions of their subjects' relative degrees of vocational importance were similar to those of their grammar school peers, their perceptions of vocational irrelevance overall were considerably less extreme. Again, the evidence reinforces the interpretation that the majority of high attainers and grammar school pupils appear to be rigidly focused on a very narrow range of subjects which they perceive in terms of strictly utilitarian vocational priorities.

The findings from all three types of relevance suggest that in general, over the Key Stage, pupils' perceptions of relevance become gradually more and more closely associated with the academic and utilitarian currency of subjects for a career, even though the perceived vocational relevance of most subjects declined over the key Stage.

Pupils on the relevance of the curriculum to different gender

In all three years, gender stereotyping was slightly more pronounced in grammar schools than in secondary schools. Grammar school pupils were more forceful about the appropriateness of PE for boys and home economics for girls. Moreover, in Year 10, grammar school pupils regarded science and IT as slightly more appropriate for boys, and French and art as more appropriate for girls.

Constructing relevance and its implications for learning and motivation

The research identified several characteristics of pupils' constructions of relevance:

♦ seeing relevance as enhancing knowledge and skills for their own sakes or for sheer satisfaction was widespread in Year 8, but declined dramatically over Key Stage 3 – by Year 10, relevance as academic attainment and examinations had replaced it as a dominant mode of discerning what was important and what was not;

♦ many pupils' accounts highlighted the role of individual aptitude in determining pupils' perceptions of relevance and effective learning;

♦ learning was considered to be relevant, though for most pupils 'learning' was narrowly construed as learning something 'new', which, when it happened, bestowed a sense of progress and heightened self-esteem for many pupils – thus, suggesting that broadening pupils' definitions of learning could be highly beneficial;

◆ the arts were widely enjoyed, yet were not seen as having any lasting worth by the majority of pupils;

◆ while some teachers argued that enjoyment was more important for effective learning than perceived relevance, for many pupils, relevance – and vocational relevance in particular – was more significant than enjoyment;

◆ according to teachers, while a minority of '*more clued-in*' pupils questioned the validity and relevance of their learning, a more mechanical compliance prevailed among the majority; and

◆ with crucial ramifications for pupils' motivation, implicit messages (e.g. the amount of time allocated to a subject or its status in the assessment system) appeared to be more influential than explicit messages (e.g. teachers explaining why learning certain skills is important) in shaping pupils' perceptions of relevance.

One key implication may well be that if we want pupils to learn effectively across all areas of the curriculum, then assessment and time allocation systems must transmit a message of greater parity of esteem and status across the curriculum as a whole.

9.6 Manageability

Both in terms of the amount and level of the work required by the Key Stage 3 curriculum, the evidence indicated an appreciable decrease in manageability at Year 9 compared to Year 8, with Year 10 being broadly similar to Year 9. Generally, pupils felt overworked in languages and maths (also English as far as homework was concerned), but underworked in the arts and practical subjects. In a substantial majority of cases where subjects were said to be '*hard*', pupils associated their experience of difficulty with a rapid pace of teaching, which curtailed opportunities for extended or repeated explanation. While the practical and arts subjects were regarded as the easiest, pupils perceived languages to be the most difficult area of the curriculum and its level of difficulty increased year-on-year throughout the Key Stage, especially in grammar schools. Indeed, grammar school pupils tended to rate their subjects as more difficult than their secondary peers. Notwithstanding this, there was evidence that at times pupils of all attainment levels were not challenged enough. Boredom and frustration were often the by-products of lessons where pupils found the work easy or were given too little to do.

In subjects where the workload was most frequently perceived to be difficult to manage (e.g. science, history, geography and technology), teachers' wish for more time was a recurring theme, and where the curriculum was seen to be unduly cumbersome, manageability for teachers became as pressing as manageability for pupils. Generally, teachers seemed keen to retain what had been prescribed for their subject, rather than to leave anything out, but many would have liked more flexibility. Although teachers registered that the revised orders had led to some improvement in terms of planning and mediation, many, nevertheless, expressed serious concern in relation to differentiation. Perceived discrepancies between the curriculum as specified and the needs of individual pupils surfaced repeatedly throughout the teacher interviews.

9.7 Enjoyment

The study corroborates many of the findings from previous research into pupil enjoyment of the curriculum. Key ingredients of an enjoyable curriculum, such as fun, interest and perceived ability in a subject resurface, as do active and practical learning approaches, a 'relaxed' classroom ambience and teacher qualities like explaining clearly, listening and fairness. Similarly, the high popularity of active and practical subjects like PE and art confirms other research.

The implications of NIC for pupil enjoyment

References to the curriculum as specified by teachers showed two distinct stances: those who saw enjoyment at this level as a non-issue and those who felt the NIC had some negative influence on pupil enjoyment. The former 'non-issue' viewpoint variously noted either that curriculum specifications were irrelevant, as teacher mediation was the key factor in enjoyment; or that some essential elements of learning were necessary but not necessarily enjoyable; or that it was Key Stage 4 rather than Key Stage 3 specifications that were problematic for enjoyment. However, a more common view was that Key Stage 3 curriculum specifications had reduced pupil enjoyment. This was variously because they were too full and caused too much pressure on pupils and teachers; or because previously enjoyed elements had been lost or because they had removed teacher choice and flexibility which had facilitated pupil enjoyment.

Turning pupils on – and turning them off

Most remarks on pupil enjoyment focused on the curriculum as mediated. Teacher performance (differentiation, ensuring new subjects were enjoyed), personality (being enthusiastic, caring, relaxed) and their choice of pedagogical tasks featured strongly in teachers' accounts. Pupil views corroborated this: the way teachers 'explained things' was the most common phrase used whenever pupils attributed a lack of enjoyment to the teacher, as well as teacher presentation style (being 'boring' or 'talking too much'). By Year 10, low-attaining and low-engaged pupils were more likely to starkly renounce lessons and subjects where the teacher was not liked.

Qualitative data from pupils on enjoyment in the curriculum as experienced highlighted 'fun', often set as a counterpoise to 'work', implying active learning from practical and creative activities was appreciated by pupils of all levels of engagement and attainment. 'Variety', cooperative learning, opportunities to experience responsibility, autonomy and choice in learning also surfaced, as well as classroom ambience and differentiation (though this was notably absent from low-engaged pupils' accounts). Pupils of all degrees of engagement and attainment shared a discourse of non-enjoyment, focusing on monotony, isolation, passivity and sedentariness in learning. However, resignation and a capacity to cope with non-enjoyment were only evident in the responses of the higher-engaged and attaining pupils.

Finally, qualitative data showed alternative versions relating to enjoyment's significance in the curriculum as internalised. Sometimes pupils and teachers held the view that learning cannot always be 'fun', yet enjoyment would occur through achievement; others felt that enjoyment not just leavened but crucially underpinned curriculum engagement and attainment: *'we learn/master; therefore*

we enjoy' as opposed to '*we enjoy; therefore we learn/master'*. Less engaged and lower-attaining pupils, and the teachers who work with this pupil type, more readily proposed the desirability of the latter formula.

Declining levels of enjoyment

Quantitative data suggested that virtually all subjects showed a decline in enjoyment over the three years. Subjects with the most marked fall-off included French, music, home economics, science and art. RE remained the least enjoyed subject throughout the Key Stage. Analyses almost always showed grammar school pupils rating subjects throughout the three years as less enjoyable – or at least not more so – than their peers in secondary schools. Additionally, pupils from schools with a high ratio of free school meals consistently enjoyed most subjects more than their peers at schools with low ratios of free school meals over the three years. Nevertheless, the former sub-sample, as well as low-attaining pupils, showed a greater decrease in enjoyment through Key Stage 3, suggesting disengagement could be a more deeply felt experience, particularly in the key areas of numeracy and literacy. The marked decline of low attainers' enjoyment throughout the Key Stage and the initial lesser enjoyment of subjects by high-attaining pupils are two stark findings from this area of analysis. Overall, the results pose an important challenge to curriculum developers and teachers: is it possible to design and mediate a curriculum that stimulates increases rather than decreases in pupils' levels of enjoyment and engagement over the three years of Key Stage 3?

9.8   Cross-curricular themes

Considerable variation was apparent in the amount and type of different schools' provision of CCTs. Undoubtedly, this was a key factor in accounting for pupils' contrasting experiences of the CCTS, but despite this, some common trends in their perceptions were still detectable. Compared with girls, boys were less positive about health education (HE) and careers education (CE) as they progressed. The importance that pupils attached to IT and HE was not reflected in the quantity and quality of provision in these areas. A curriculum designed, planned and mediated from the pupils' perspective would give greater weight to IT and HE (and CE in Year 10). There was telling evidence to indicate that there was plenty of scope for enhancing the mediation, standing and the level of challenge required of CCTs in many schools.

Experience of the CCTs could change behaviour – pupils cited how through the CCTs they had learned how to respect others, save money and eat more healthily. Pupils did regard the CCTs as useful; however, particularly with regard to EMU and HE, there was a sense that as Key Stage 3 progressed, pupils, especially high attainers, were less convinced of their value. By Year 10, these pupils were describing the work they had done on respect for others as '*common sense'* and acknowledging that they already knew about this. There may, therefore, be a need to change the emphases of EMU (and other CCTs) in Years 9 and 10 by moving beyond a general focus on respecting others to take in some more complex conceptual and behavioural underpinnings, perhaps taking in conflict resolution, arbitration, identity formation, and elements of sociology and psychology.

9.9 So is the curriculum working?

Several of the findings could be used to mount a positive answer to this question.

☆ Whilst providing a common curriculum framework but avoiding stipulating the length of time to be spent on subjects, the specifications of the NIC have allowed schools the flexibility to mould the structure of the timetable according to their particular needs and ethos – thus offering diversity in curricula across schools.

☆ Although the balance of the curriculum was not always to their liking, pupils most frequently nominated aspects which were already part of the curriculum, either as a separate subject or a CCT, for increased provision – very rarely did they suggest some element which currently has no place in the NIC.

☆ In terms of the coherence of the curriculum, most pupils were able to cite incidences when two or more subjects had linked together. The majority of those pupils who perceived cross-curricular links found that these were beneficial for their learning.

☆ Most teachers felt that the NIC framework had led to greater continuity within subjects. Pupils could detect some progression in the NIC subjects and they considered that their previous year of schooling had prepared them well for their current year.

☆ Pupils in all three years felt they were making positive progress.

☆ Pupils were well attuned to the value of the key skills – literacy, numeracy and ICT – and exhibited a strong desire to achieve academically.

☆ Teachers reported that the revised orders had improved the workload of the NIC and believed that the conceptual level of difficulty was satisfactory. Pupils never rated any of their subjects as 'very hard' or felt extremely overworked in any subject.

☆ Although there was a decline over the Key Stage, pupils generally enjoyed their subjects, especially at the start of Key Stage 3.

☆ The CCTs were perceived by pupils to be valuable, and most reported that they had a positive impact on their behaviour.

At the same time, some serious problems were identified by the research.

■ In reality, there was no common curricular entitlement. Hence, in the context of a selective system, many pupils lacked access to various types of curricula.

■ Very few schools were meeting the recommended minimum times for all subjects, and the balance of the curriculum was out of alignment with pupils' views, with too great an emphasis on English, maths and languages and too little time devoted to practical subjects and CCTs. Low-engaged pupils expressed the gravest concerns about the over-representation of academic subjects, and there was evidence that the lack of balance in the curriculum was contributing to their sense of disengagement. Grammar school pupils in particular found their curricula unbalanced.

- The NIC did not appear to keep pace with pupils' maturation over the Key Stage. In Year 10, more pupils expressed a desire for sex education, careers education, business studies and opportunities to debate controversial topics like abortion than they had done earlier. Similarly, by Year 10, CCT provision, especially HE and EMU, deemed worthwhile in previous years, was often regarded as *'common sense'*.

- Valuable learning opportunities for exploring continuities across the curriculum were lost. Pupils' days were compartmentalised into a series of episodic and subject-based experiences with minimal reference made to learning in other areas.

- Continuity and progression at the interface between Key Stages 2 and 3 were problematic. Pupils perceived a high degree of repetition in their studies year-on-year throughout Key Stage 3, though especially so between Years 7 and 8.

- Although pupils did detect follow-on in their subjects lesson-to-lesson, only high attainers perceived it in the way that matched teachers' descriptions of how follow-on was built into their schemes of work.

- Year 9 resembled an educational limbo. Pupils' largely good opinion of the NIC in Year 8 nosedived in Year 9 – their enjoyment of the curriculum and their perceptions of its relevance, breadth and manageability all declined, then recovered somewhat in Year 10 as pupils, by their own admission, were motivated by the Key Stage 3 tests. This raises several questions about the efficacy of the NIC. What is the impact on pupils' engagement of a 'poor' school year (indeed, low-engaged pupils' views showed least upturn in Year 10)? Does this mean that the curriculum *per se* had not developed in pupils an intrinsic desire to learn? Is the curriculum working if assessment is the key source of motivation? Indeed, it emerged that assessment had a deleterious effect on the curriculum: Key Stage 3 ended as Key Stage 2 had done, with curriculum continuity and progression, balance, relevance and manageability all disturbed for the sake of assessment in Years 7 and 10.

- Rather than broadening their minds, pupils' outlook, in many respects, grew narrower as Key Stage 3 progressed. They became increasingly utilitarian in their sense of the relevance of the curriculum over the Key Stage: by Year 10, they were fixed on the relevance of a few subjects that would bring credible academic success; perceptions of the gender relevance of certain subjects remained entrenched; academic attainment became their primary justification for a subject's relevance.

- Many pupils were denied opportunities for intellectual and creative adventure. Although high attainers registered the most extreme perceptions of difficulty, these pupils, as well as teachers, criticised the lack of challenge in their experiences.

- Pupils' enjoyment of the curriculum declined over the Key Stage. Several did not look forward to coming to school. The number of pupils who found subjects boring or had difficulty concentrating in lessons was higher in Year 10 than Year 9.

■ Ironically, given that the curriculum as specified was widely seen to be 'academic', high attainers, especially grammar school pupils, emerged as the most disengaged group.

■ The relative enthusiasm of low attainers for the curriculum in Year 8 was not maintained. These pupils' estimation of the curriculum fell dramatically over the Key Stage in terms of enjoyment and relevance. Since low attainers' baseline in Year 8 had been more positive than that of high attainers, this possibly suggests that the decline in their enjoyment of the curriculum and their belief in its relevance was a more deeply felt experience for low-attaining pupils.

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APPENDIX

Pupil questionnaire

NORTHERN IRELAND CURRICULUM COHORT STUDY

A QUESTIONNAIRE FOR YEAR 9 PUPILS

◆   NFER has been asked by CCEA to carry out a three year study of pupils' views on the curriculum. You may remember that you filled in a questionnaire for us last year, when you were in Year 8. We would be very grateful if you could do this again for us, now that you are in Year 9. **We would like to know what you think about the things you do and learn about in your lessons.**

◆   Your responses will be completely confidential.

◆   The questionnaire should take about one hour to fill in.

◆   The researcher in the class with you today will explain how to complete the questionnaire. If you are not sure about any question, please ask the researcher for help.

◆   We are interested in YOUR opinions, so please don't discuss your answers with the person sitting next to you.

◆   It is not a test. Your replies will not be marked, so don't spend too long worrying about spelling etc.

1   Looking at all the things you have done in the second year at this school, what are **the most important things** you have learned?

_____

_____

_____

_____

_____

_____

_____

2   We would like you to think about what you have done, studied and learnt in each of your subjects **over the past year** (i.e. since September 1997). For each subject, look first at the words at the opposite end of each row, then circle **one** number which best matches what you think about what you have done and learnt in that subject.

Here's an example to complete with your researcher:

Drama

hard	1	2	3	4	5	easy
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it

Please do the following subjects by yourself, though ask the researcher for help if you need it. Remember to think about the **content** of each subject (i.e. what you have done and learnt).

2

English

hard	1	2	3	4	5	easy
mainly for girls	1	2	3	4	5	mainly for boys
I really enjoy it	1	2	3	4	5	I really dislike it
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it
useful for me now	1	2	3	4	5	useless for me now
really helped me to develop as a person	1	2	3	4	5	hasn't helped me to develop as a person
lessons usually build on the last one	1	2	3	4	5	lessons don't usually build on the last one
too little homework	1	2	3	4	5	too much homework
I feel overworked in class	1	2	3	4	5	I feel underworked in class
I've made poor progress in this subject	1	2	3	4	5	I've made good progress in this subject

Maths

hard	1	2	3	4	5	easy
mainly for girls	1	2	3	4	5	mainly for boys
I really enjoy it	1	2	3	4	5	I really dislike it
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it
useful for me now	1	2	3	4	5	useless for me now
really helped me to develop as a person	1	2	3	4	5	hasn't helped me to develop as a person
lessons usually build on the last one	1	2	3	4	5	lessons don't usually build on the last one
too little homework	1	2	3	4	5	too much homework
I feel overworked in class	1	2	3	4	5	I feel underworked in class
I've made poor progress in this subject	1	2	3	4	5	I've made good progress in this subject

Science

hard	1	2	3	4	5	easy
mainly for girls	1	2	3	4	5	mainly for boys
I really enjoy it	1	2	3	4	5	I really dislike it
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it
useful for me now	1	2	3	4	5	useless for me now
really helped me to develop as a person	1	2	3	4	5	hasn't helped me to develop as a person
lessons usually build on the last one	1	2	3	4	5	lessons don't usually build on the last one
too little homework	1	2	3	4	5	too much homework
I feel overworked in class	1	2	3	4	5	I feel underworked in class
I've made poor progress in this subject	1	2	3	4	5	I've made good progress in this subject

3

Technology and Design

hard	1	2	3	4	5	easy
mainly for girls	1	2	3	4	5	mainly for boys
I really enjoy it	1	2	3	4	5	I really dislike it
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it
useful for me now	1	2	3	4	5	useless for me now
really helped me to develop as a person	1	2	3	4	5	hasn't helped me to develop as a person
lessons usually build on the last one	1	2	3	4	5	lessons don't usually build on the last one
too little homework	1	2	3	4	5	too much homework
I feel overworked in class	1	2	3	4	5	I feel underworked in class
I've made poor progress in this subject	1	2	3	4	5	I've made good progress in this subject

History

hard	1	2	3	4	5	easy
mainly for girls	1	2	3	4	5	mainly for boys
I really enjoy it	1	2	3	4	5	I really dislike it
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it
useful for me now	1	2	3	4	5	useless for me now
really helped me to develop as a person	1	2	3	4	5	hasn't helped me to develop as a person
lessons usually build on the last one	1	2	3	4	5	lessons don't usually build on the last one
too little homework	1	2	3	4	5	too much homework
I feel overworked in class	1	2	3	4	5	I feel underworked in class
I've made poor progress in this subject	1	2	3	4	5	I've made good progress in this subject

Geography

hard	1	2	3	4	5	easy
mainly for girls	1	2	3	4	5	mainly for boys
I really enjoy it	1	2	3	4	5	I really dislike it
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it
useful for me now	1	2	3	4	5	useless for me now
really helped me to develop as a person	1	2	3	4	5	hasn't helped me to develop as a person
lessons usually build on the last one	1	2	3	4	5	lessons don't usually build on the last one
too little homework	1	2	3	4	5	too much homework
I feel overworked in class	1	2	3	4	5	I feel underworked in class
I've made poor progress in this subject	1	2	3	4	5	I've made good progress in this subject

4

Art and Design

hard	1 2 3 4 5	easy
mainly for girls	1 2 3 4 5	mainly for boys
I really enjoy it	1 2 3 4 5	I really dislike it
important for job/career	1 2 3 4 5	not needed for job/career
important for adult life	1 2 3 4 5	not needed for adult life
too much of it	1 2 3 4 5	not enough of it
useful for me now	1 2 3 4 5	useless for me now
really helped me to develop as a person	1 2 3 4 5	hasn't helped me to develop as a person
lessons usually build on the last one	1 2 3 4 5	lessons don't usually build on the last one
too little homework	1 2 3 4 5	too much homework
I feel overworked in class	1 2 3 4 5	I feel underworked in class
I've made poor progress in this subject	1 2 3 4 5	I've made good progress in this subject

Music

hard	1 2 3 4 5	easy
mainly for girls	1 2 3 4 5	mainly for boys
I really enjoy it	1 2 3 4 5	I really dislike it
important for job/career	1 2 3 4 5	not needed for job/career
important for adult life	1 2 3 4 5	not needed for adult life
too much of it	1 2 3 4 5	not enough of it
useful for me now	1 2 3 4 5	useless for me now
really helped me to develop as a person	1 2 3 4 5	hasn't helped me to develop as a person
lessons usually build on the last one	1 2 3 4 5	lessons don't usually build on the last one
too little homework	1 2 3 4 5	too much homework
I feel overworked in class	1 2 3 4 5	I feel underworked in class
I've made poor progress in this subject	1 2 3 4 5	I've made good progress in this subject

PE

hard	1 2 3 4 5	easy
mainly for girls	1 2 3 4 5	mainly for boys
I really enjoy it	1 2 3 4 5	I really dislike it
important for job/career	1 2 3 4 5	not needed for job/career
important for adult life	1 2 3 4 5	not needed for adult life
too much of it	1 2 3 4 5	not enough of it
useful for me now	1 2 3 4 5	useless for me now
really helped me to develop as a person	1 2 3 4 5	hasn't helped me to develop as a person
lessons usually build on the last one	1 2 3 4 5	lessons don't usually build on the last one
too little homework	1 2 3 4 5	too much homework
I feel overworked in class	1 2 3 4 5	I feel underworked in class
I've made poor progress in this subject	1 2 3 4 5	I've made good progress in this subject

5

RE

hard	1	2	3	4	5	easy
mainly for girls	1	2	3	4	5	mainly for boys
I really enjoy it	1	2	3	4	5	I really dislike it
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it
useful for me now	1	2	3	4	5	useless for me now
really helped me to develop as a person	1	2	3	4	5	hasn't helped me to develop as a person
lessons usually build on the last one	1	2	3	4	5	lessons don't usually build on the last one
too little homework	1	2	3	4	5	too much homework
I feel overworked in class	1	2	3	4	5	I feel underworked in class
I've made poor progress in this subject	1	2	3	4	5	I've made good progress in this subject

French

(if not, alternative language ....)

hard	1	2	3	4	5	easy
mainly for girls	1	2	3	4	5	mainly for boys
I really enjoy it	1	2	3	4	5	I really dislike it
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it
useful for me now	1	2	3	4	5	useless for me now
really helped me to develop as a person	1	2	3	4	5	hasn't helped me to develop as a person
lessons usually build on the last one	1	2	3	4	5	lessons don't usually build on the last one
too little homework	1	2	3	4	5	too much homework
I feel overworked in class	1	2	3	4	5	I feel underworked in class
I've made poor progress in this subject	1	2	3	4	5	I've made good progress in this subject

Irish (if appropriate)

hard	1	2	3	4	5	easy
mainly for girls	1	2	3	4	5	mainly for boys
I really enjoy it	1	2	3	4	5	I really dislike it
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it
useful for me now	1	2	3	4	5	useless for me now
really helped me to develop as a person	1	2	3	4	5	hasn't helped me to develop as a person
lessons usually build on the last one	1	2	3	4	5	lessons don't usually build on the last one
too little homework	1	2	3	4	5	too much homework
I feel overworked in class	1	2	3	4	5	I feel underworked in class
I've made poor progress in this subject	1	2	3	4	5	I've made good progress in this subject

6

Home Economics

(if not, alternative subject ....)

hard	1	2	3	4	5	easy
mainly for girls	1	2	3	4	5	mainly for boys
I really enjoy it	1	2	3	4	5	I really dislike it
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it
useful for me now	1	2	3	4	5	useless for me now
really helped me to develop as a person	1	2	3	4	5	hasn't helped me to develop as a person
lessons usually build on the last one	1	2	3	4	5	lessons don't usually build on the last one
too little homework	1	2	3	4	5	too much homework
I feel overworked in class	1	2	3	4	5	I feel underworked in class
I've made poor progress in this subject	1	2	3	4	5	I've made good progress in this subject

Health Education

hard	1	2	3	4	5	easy
mainly for girls	1	2	3	4	5	mainly for boys
I really enjoy it	1	2	3	4	5	I really dislike it
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it
useful for me now	1	2	3	4	5	useless for me now
really helped me to develop as a person	1	2	3	4	5	hasn't helped me to develop as a person
lessons usually build on the last one	1	2	3	4	5	lessons don't usually build on the last one
too little homework	1	2	3	4	5	too much homework
I feel overworked in class	1	2	3	4	5	I feel underworked in class
I've made poor progress in this subject	1	2	3	4	5	I've made good progress in this subject

IT - using computers

hard	1	2	3	4	5	easy
mainly for girls	1	2	3	4	5	mainly for boys
I really enjoy it	1	2	3	4	5	I really dislike it
important for job/career	1	2	3	4	5	not needed for job/career
important for adult life	1	2	3	4	5	not needed for adult life
too much of it	1	2	3	4	5	not enough of it
useful for me now	1	2	3	4	5	useless for me now
really helped me to develop as a person	1	2	3	4	5	hasn't helped me to develop as a person
lessons usually build on the last one	1	2	3	4	5	lessons don't usually build on the last one
too little homework	1	2	3	4	5	too much homework
I feel overworked in class	1	2	3	4	5	I feel underworked in class
I've made poor progress in this subject	1	2	3	4	5	I've made good progress in this subject

7

288

3   Thinking about all you have done in the second year at this school, have you learnt anything which has changed your views or the way you think about things?

Please circle one number.   Yes 1   No 2   Not Sure 3

If YES:

(a)   how have your views changed?

_____

_____

_____

(b)   which subjects helped bring about the changes?

_____

_____

_____

4   Please say whether you agree or disagree with the following statements by circling **one** number in each row.

	Agree	Not Sure	Disagree
(a) I have enjoyed the things I have done in Year 9 more than the things I did in Year 8.	1	2	3
(b) Many of the subjects that I have done this year just repeated what I learnt in Year 8.	1	2	3
(c) The things I did in Year 8 prepared me well for Year 9.	1	2	3
(d) Most of the subjects done this year followed on well from what I did in Year 8.	1	2	3
(e) I have learnt more things in Year 9 than I did in Year 8.	1	2	3
(f) I was more interested in my school work in Year 8 than in Year 9.	1	2	3

8

5   Is there anything that you would like to have done or learnt about at school which so far has not been covered sufficiently in your lessons?

Please circle one number.   Yes   1   No   2

If YES, please list up to three skills, topics or subjects that you would like to have done or learnt about:

(a) _____

(b) _____

(c) _____

6   Try to think of an example when what you did or learnt in one subject linked up with what you did or learnt in another subject or subjects.

(a)   What were the subjects that linked up?

_____

(b)   Please could you tell us how they linked up?

_____

_____

_____

(c)   Did these links help you with your learning?

_____

_____

_____

(d)   If you can't remember any link, please tick the box.   [   ]

9

7   (a)   Please circle one number in each row to show how helpful you think the following methods have been in finding out how you are getting on in your work this year. If you think a particular method has not been used this year, circle 'not used'.

	Not helpful	Fairly helpful	Very helpful	Not used
Examinations	1	2	3	4
Marks or grades on my work	1	2	3	4
Reports	1	2	3	4
Tests (e.g. at the end of units)	1	2	3	4
Teacher's written comments on my work	1	2	3	4
What the teacher says about my work	1	2	3	4
Looking back at my work myself	1	2	3	4

(b)   If you can think of any other ways you find out how you are getting on, please write them in the space below and circle a number.

....	1	2	3	4
....	1	2	3	4
....	1	2	3	4

(c)   Which is the most helpful of all the methods listed in 7(a) and 7(b), and why?

_____

_____

_____

_____

8   Please say whether you agree/disagree with the following statements by circling one number in each row

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
(a) I look forward to coming to school	1	2	3	4	5
(b) I find most of my subjects interesting	1	2	3	4	5
(c) I know I can always ask for help when I don't understand	1	2	3	4	5
(d) I think I am doing well at school	1	2	3	4	5
(e) I worry about some of my subjects	1	2	3	4	5

10

9   This question asks you to explain how you feel about different subjects.
    First, please **circle** the number which applies to you.

    (a) I find it hard to concentrate in some of my subjects   Yes   1   No   2

    If YES, please list the three subjects where it is hardest to concentrate.

    ....

    ....

    ....

    (b) I find some subjects boring   Yes   1   No   2

    If YES, please list the three most boring subjects here.

    ....

    ....

    ....

Finally, some questions about yourself.

10 **Your name**   ....

11 **Your date of birth**

Date	Month	Year

12 **Sex**   *Please circle one number.*   Boy   Girl
                                                               1   2

13 **Form**   *Please write the name of your form in the box.*   [   ]

14 **If you did not complete this questionnaire when you were in Year 8, please answer this
    question. Please tell us about your parents' (or guardians') jobs.**
    *If either of them is not working at the moment, please tell us about the last job he or she had. If
    you can't answer any of the following questions, write 'Don't know' in the appropriate space.*

                                        Father   **Mother**

    (a) What is the name of the job?   ....

    (b) What kind of work do they do? ....

    (c) What sort of place or
        organisation do they work
        for?   ....

                            THANK YOU VERY MUCH FOR YOUR HELP

                                            11

292

BRIDGING THE GAP?
The National Curriculum and Progression from Primary to Secondary School
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This book reports the findings of a major research project undertaken by NFER which explore the impact of the National Curriculum on continuity and progression in learning. The findings reveal a disturbing contrast between the rhetoric of the National Curriculum and the reality of the Year 7 classroom.

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IS THE CURRICULUM WORKING?
The Key Stage 3 Phase of the
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This report presents the findings from the Key Stage 3 phase of the Northern Ireland Curriculum Cohort Study, a major piece of longitudinal research tracking pupils' experiences and perceptions of the curriculum from upper Key Stage 2 to the end of Key Stage 3. For this report, evidence was collected through:

- annual questionnaires to 2,600 pupils in 50 schools and their senior managers
- case-study fieldwork in five schools which involved biannual interviews with the same 60 pupils, interviews with teachers and senior managers, and observations of lessons.

The study investigated the reality of pupils' experience of the curriculum, beyond the official specifications. Pupils' perspectives on the central curriculum design concepts formed a key part of the research. Thus, the report presents and examines their views of the whole curriculum in terms of its:

- breadth, balance and coherence
- continuity and progression
- relevance
- manageability
- enjoyment
- provision of cross-curricular themes.

The research is one of the few UK studies to explore pupils' experiences and perceptions of learning across the whole curriculum. The study's longitudinal dimension, its whole curriculum focus, its concerns with key curriculum design principles and its preoccupation with the pupil experience are all qualities that allow the research to make a distinctive contribution to the debate about the efficacy of national curricula. It is hoped that the report offers evidence and analyses that will help schools and policy makers to continue to develop a curriculum that meets the needs and expectations of young people.